

EARLY MODERN EXTENDED MINDS & THE SHAKESPEAREAN SUBJECT OF THE MIRROR

Miranda Anderson

PhD in English Literature
The University of Edinburgh, 2009

This is to certify that this is all my own unaided work

Date... 15th July 2010

notions of access and opacity both between and within subjects, exploring early modern attitudes towards phenomenological issues. This leads to a discussion of mirrors and mirroring in early modern society, focusing especially on the relation of mirror-motifs to models of cognition and subjectivity.

These five chapters provide the context for the examination of Shakespeare's use of mirrors in Chapters 6 and 7. The modern and early modern conceptualization of the human subject and cognition as embodied, embedded and extended newly illuminates Shakespeare's mirror-motifs, which reveal the boundaries between the subject and the world fluctuating between permeability and impermeability, exploring issues of how and to what extent various mirrors function as extensions of the human mind and subject.

Contents

Preface	7
Chapter 1 The Extended Mind Hypothesis	11
Chapter 2 Extending the Literary Mind and the Psychoanalytical Tradition	49
Chapter 3 Early Modern Ensouled and Embodied Subjects	73
Chapter 4 Early Modern Language and Memory Forms	117
Chapter 5 Early Modern Intrasubjectivity and Intersubjectivity	145
Chapter 6 Shakespeare: Natural-Born Mirrors	177
Chapter 7 Shakespeare: Perspectives and Words of Glass	201
Epilogue	235
Bibliography	239

Preface

O brave new world
That has such people in't! (*Tempest* 5.1.186-7)

Recent developments in cognitive science and neuroscience reveal cognition and subjectivity to be distributed in the brain and body and extended out into the world: 'the extended mind hypothesis' (EM). This thesis aims to demonstrate the potential usefulness of the humanities' extending their knowledge about current research in cognitive science and neuroscience. Trends in literary criticism have recently focused on various kinds of social constructivism in which bodies are presented as cultural constructs (notably in new historicism, cultural materialism, and feminist, queer and globalisation studies). However, EM suggests another perspective that takes account of sociocultural and technological environments as *natural* components of cognitive processing, which are enabled by functional and neurological plasticity. EM enables a reassessment of ideas about the subject as either autonomous or as only socially constructed, which may have constrained understandings of historical, as well as modern, subjectivity.

Furthermore, early modern texts suggest that ideas about human extendedness are not simply a product of our own age. Arguably, EM is a hybrid paradigm taking different forms in different cultures. Its particular parallels with early modern discourses' constructions of cognition and subjectivity as humourally embodied, socioculturally embedded, and technologically and intersubjectively extended are examined here, with the final chapters focusing specifically on the exploration of how these themes operate in, and alter a reading of, Shakespeare's mirror-motifs.

Nevertheless, this thesis presumes that both the 'mind' and 'subject' are metaphorical concepts: they therefore extend more fluidly into the world than the biological brain or body structure, which contribute to their conceptual capacity. The mind cannot be literally described: even those who would reduce it to the biological brain are hampered by the current incompleteness of knowledge of its physical nature, and there is a manifest difference in scale between neural activity and the capacities of the mind. Therefore analysis of the mind should take into account not only the findings of current neuroscience but also the more or less helpful literal and literary metaphors employed; practical and imaginative fictions that shape and are shaped by the brain, language, and sociocultural and technological trends. Similarly, the subject is not reducible to the biological organism, although its body is a participating factor in its formation. Scientific terms and cultural and literary history are already implicated in each other. This recognition invites the exploration of how

innovative work in cognitive science and neuroscience can help us to explore anew the metaphors of the mind and subject conceived of in the early modern period.

Despite, and because of, the comprehensive nature of the terms 'Early Modern' and 'Extended Mind', the former potentially covering the period from the fifteenth till the eighteenth century, and the latter expanding the term 'mind' to include bodily and non-biological resources, it is worth noting at the outset that the bounds of the discussion in this thesis are at once wider and necessarily more limited than may initially be suggested. Modern thinking about the extended mind was initially expansive in welcoming evidence of the significant role that human embodiment and embeddedness play in cognition as part of the mind's extendedness. Internal fractures between 'embodied', 'embedded' and 'extended' theories of cognition are growing as the terms become increasingly refined, but in considering the early modern understanding of the human cognitive economy, this thesis draws on all these notions, with the term 'extendedness' used in its most liberal sense.¹ The constraining parameters of the discussion are represented by the second half of the title: 'the Shakespearean Subject of the Mirror'. The thesis aims towards an analysis of Shakespeare's use of mirror-motifs. Discussions in the early modern sections are therefore guided not only by ideas related to the extended mind and subject, but also by the particular interests and emphasises raised by the Shakespearean material.

Chapter 1 provides an introductory background to the approaches that are employed in this thesis. It begins with an overview of the development of theories related to the idea of the mind as extended beyond the brain, and the subject beyond the body, through the use of supplementary tools and resources. This overview focuses in particular on Clark's seminal descriptions of EM, as well as indicating reasons for points of divergence from mainstream EM. Chapter 2 explores this research's relation to recent psychoanalytical, cultural and literary theories. This thesis argues that the social constructivist models that pervade literary studies in fact have a neurological basis; our ability to be constructed by cultural forces relates to the plasticity of the human brain. At the same time, it can be argued that our extendedness tempers any notion of universal centring that might be claimed for embodiment, since humans might also be understood as being subject to decentring forces. Thus, these two chapters aim to consider a range of ideas related to modern EM, and then to demonstrate where an EM approach fits in relation to theoretical models currently employed in literary analyses.

¹ Further brief discussion of relevant debates follows in Chapter 1.

Chapters 3, 4 and 5 explore early modern notions of the mind and of the subject as extended into the body and the world, concentrating on texts circulating during Shakespeare's lifetime. Early modern notions about cognition and subjectivity hold remarkable parallels, as well as significant contrasts, with recent theories that cognition and subjectivity are extended into the world. Chapter 3 considers early modern understandings of the body, the mind and the soul, and the relation between them and the world in which they exist. This establishes that several notions of extendedness were operative, variously overlapping and conflicting: the mind's operations through the body and the world in relation to the humours, passions, spirits and soul, *and* the mind's extension through intellectual flights. Chapter 4 explores attitudes to forms of language and memory. The memory arts were understood as a form of cognitive extension that could supplement the reconstructive and leaky nature of the biological memory. Interest in language's role in the mind and in making one human is also evident, especially in contemporary rhetorical texts and character writings, with language being described as fundamentally formative and even as another perceptual modality, a sixth sense; yet, it was also considered an unreliable, unruly and feminine asset, perhaps less trustworthy than bodily gestures and facial expression in overcoming the distance between inner and outer. Chapter 5 explores early modern notions of a human as composed of many agencies, and conversely of more than one human acting together as one agent. This raised issues of access and opacity both between and within subjects, heightening consciousness of the role of clothes and social training, and increasing interest in the means of reading other subjects and oneself. The last section then analyses the early modern mirror as a technological and literary instrument that was used to portray and clarify understandings of the human subject and mind.

The backdrop having been set, Chapters 6 and 7 proceed with an in depth study of mirror-motifs as used by Shakespeare. Close exploration of one literary resource, the mirror and its interactions with questions of cognition and subjectivity, allows a detailed consideration of how notions of embodiment, embeddedness, and extendedness were explored imaginatively in Shakespeare's works, and tend to engage with notions of permeability, opacity and hybridity. The extended forms of mind and subjectivity operative in the early modern period are reflected in the use of the mirror-motif to signify other objects, concepts, words, states and characters. A primary emphasis in all of the uses of these metaphorical or literal mirrors is on exploring the extent to which they function as an extension of a character; demonstrating that the boundaries constructed between internal and external, and subject and object can be permeable and contestable in Shakespeare's works.

Thus, a three-fold resonance is established: EM is compatible with and yet interrogative of recent cultural and literary theory, it harmonizes with issues raised by early modern texts, and it is attuned to the manifestations of cognition and subjectivity evident in the mirror-motif extracts from Shakespeare's works.

All references to Shakespeare are to *The Norton Shakespeare*. References to Montaigne's texts are to *The Complete Works*. All references to John Donne's poetry are to *The Major Works*, and all references to Ben Jonson's poetry are to *The Complete Poems*. Early modern dictionaries are listed in the bibliography under their authors' names. Transcriptions of early modern texts retain original spelling, with the following exceptions: variant forms of 's' are modernised and contractions are silently expanded. In the case of plays and poems cited directly from early modern editions, page or signature references rather than act, scene or line numbers are provided.

Parts of Chapter 5 have previously been published in 'Chaucer and the Subject of the Mirror' and 'Early Modern Mirrors,' in *The Book of the Mirror*, edited by Miranda Anderson (Newcastle: Cambridge Scholars Publishing, 2007).

With thanks to Sarah Carpenter, a mirror of clarity, and to family and friends.

The Extended Mind Hypothesis

In *Mindware* the philosopher Andy Clark presents a paradigm of how scholars construct academic works and theories:

The brain supported some rereading of old texts, materials, and notes. While rereading these, it responded by generating a few fragmentary ideas and criticisms. These ideas and criticisms were then stored as more marks on paper, in margins, on computer discs, etc. The brain then played a role in reorganizing these data on clean sheets, adding new on-line reactions and ideas. The cycle of reading, responding, and external reorganization is repeated, again and again. Finally, there is a product. A story, argument or theory. But this intellectual product owes a lot to those repeated loops out into the environment. Credit belongs to the embodied, embedded agent in the world. (142)

The particular paradigm Clark proposes here is of a cognitive system that consists of brain, body and world: the extended mind hypothesis (EM). EM's proposal is that human cognitive processes can involve coalitions of biological and non-biological resources, rather than being confined to neural circuitry. This constitutes the main theoretical influence on this thesis: in this opening chapter there is an exploration of philosophical, psychological, linguistic, and cognitive and neuroscientific research related to EM, in order to establish evidence and arguments for this approach. The breadth of the range of research considered reflects the mass of interactions that emerge between disciplines, when discussing the multifaceted and multilayered nature of the mind. This thesis takes an expansive approach to the concept of an extended mind, including under the umbrella of EM, the various cognitive roles of: embodiment in a material body; embeddedness in a sociocultural and environmental setting; as well as extendedness through technological and other resources. All these forms of cognitive processes are potentially of interest and significance to an understanding of the human cognitive economy.

Another aim of this chapter is to expand on the ways in which EM and the related research can provide scaffolding for a reappraisal of human subjectivity. Clark suggests that EM's proposals 'interact with vexing questions about personal identity and the nature of the self', but he acknowledges that as yet these remain unresolved (*Supersizing* 161-2). The particular interest in how EM interacts with understandings of subjectivity, relates to this thesis' employment of EM as a means of reading Shakespearean subjectivity; after having established evidence for early modern parallels in their depictions of cognition and subjectivity, primarily

concentrating on the period contemporaneous with Shakespeare, the central literary focus. This thesis proposes that EM is a modern manifestation of a paradigm that existed in a different but related form in the early modern period. The paradigm of human 'cognitive hybridization' (Clark, *Natural-Born* 4) represents human nature's persisting ability to reach outside of itself and incorporate aspects of the world into its functioning and subjectivity; so that although this hybridity is itself a continuing factor, humans vary and develop in relation to their context. This thesis contends that the early modern period, like the current period of sociocultural and technological transformation, displays an especially marked consciousness, concern and celebration over humans' extendedness.

The hypothesis that humans have cognitive processes that loop out into the body and the world, invites a reconsideration of other theories that involve assumptions or speculations about the relationship between the mind, body and world. The more polyvalent models explored in this chapter will be used in the later chapters, to throw light on representations of cognition and subjectivity in contemporary psychoanalytical, cultural and cognitive literary studies, before turning to the parallels with early modern thinking and texts. This will all contribute to a study in the concluding chapters of the fertile use of the mirror, as a visual and figurative resource for cognition and subjectivity in Shakespeare's works. The rest of this section of the chapter gives a brief description of how the extended mind hypothesis developed, before turning in the following sections, to the exploration of research relevant to the claims that are made here for an extended view of human subjectivity and cognition.

In the opening quotation, Clark presents the means by which a theory develops, in order to demonstrate the use by the subject of the tools of pen, paper and computer to externalise its thoughts in a stable form that allows for further reflection, and clearer and higher level thoughts on the original murky and mundane ones. The suggestion is that rather than a disembodied or brain-bound intellect pouring its preformed ideas onto the page, the tools used participate in the development of secondary thoughts. The extent to which tools become a part of the process of cognition is reflected in the fact that tools which are used repeatedly become transparent in use (*Natural-Born* 37, 48). Provided nothing goes wrong, as you write you do not normally think of the pen or the keyboard as separate objects, as your flow or stutter of thoughts appear on the page or screen; anymore than you think of the neural synapses firing in your brain, or the hands that you are using to control the pen, or type the letters, or hold this page. Furthermore, the words used are

themselves another form of ‘mind tool’,² since language itself is a fundamental part of the human cognitive repertoire that makes possible the initial concretisation of an idea. These are some of the essential points of Clark’s proposal that we are ‘natural-born cyborgs’: we are composed entirely of internal and external tools: ‘Tools R Us, and always have been’ (33, 37).

Clark’s proposal expands upon a theory called ‘distributed cognition’, which was developed in the 1990s by the cognitive anthropologist Ed Hutchins; the term is sometimes used interchangeably with ‘extended mind’. In his renowned study of ship navigation, *Cognition in the Wild*, Hutchins made a case for the human cognitive system as embodied and extended into the material world through equipment and other social agents. Hutchins describes navigation tools as artefacts that incorporate within them aspects of the expertise necessary for accurate calculations to be made, whilst the navigation team operate collectively as a cognitive and computational system (155, xiv). Unlike Clark, his research in this area has primarily focused upon technical working environments and tasks, such as the navigation team on board a ship collectively plotting its course into a harbour; therefore whilst still a useful resource, this limits the wider applicability of Hutchins’ proposals to the literary focus of this study.

Clark first encountered such ideas in a particular passage by Rumelhart and his colleagues in their 1986 paper on ‘parallel distributed processing’ (PDP) (*Mindware* 142). The PDP model has become the prevailing form of ‘connectionism’, which more generally describes mental phenomena as emerging from interconnected networks of elementary units, and the terms are now often used synonymously. The discovery that the neural system consists of distributed networks of units processing information in parallel led to the PDP model of knowledge as stored in the reinforceable connections between units. This can more easily be conceptualised through comparing it with the way that through sport we can strengthen our muscle connections; similarly through experience we can strengthen our neural connections, reinforcing and creating new pathways. The passage referred to by Clark describes the tendency of the associative and pattern-completing brain to rely on external resources to overcome its limitations. It depicts our typical use of a pen and paper as tools to complete difficult mathematical sums: we divide the task into simple pattern completing sections easily perceivable and manageable by our brain and store the accumulation of data on paper.

² This term was coined by Richard L. Gregory, *Mind in Science* 48.

Each cycle of this operation involves first creating a representation through manipulation of the environment, then a processing of this (actual physical) representation by means of our well tuned perceptual apparatus leading to a further modification of this representation. By doing this we reduce a very abstract conceptual problem to a series of operations that are very concrete...Indeed, on this view, the external environment becomes a key extension to our mind. (Rumelhart et al. 45-46)

Rumelhart and his co-authors go on to explain that because our brains are good at pattern matching, modelling our world and manipulating our environment, we tend to use external or internalised mental models to reason (46). Hutchins also credits this passage with influencing his theory, paraphrasing it here:

These tools permit the people using them to do the tasks that need to be done while doing the kinds of things people are good at: recognizing patterns, modelling simple dynamics of the world, and manipulating objects in the environment. (155)

Although both Hutchins and Clark were indebted to a connectionist theory of the architecture of the brain in outlining their respective theories of the mind as distributed or extended, most connectionists remain 'internalists' about cognition. Michael Wheeler describes that most research in orthodox cognitive science remains 'recognizably Cartesian in character', in terms of a number of principles, including an 'explanatory dualism', that posits 'a divide between mind and the rest of nature' (14, 27). Yet, Clark emphasises that whilst cognitive systems may always have connectionist core systems, since these may prove indispensable, this does not mean that other kinds of representational and computational resources can not come to act 'as proper parts of more complex, hybrid, distributed, cognitive wholes' (*Supersizing* 107). The connectionist core is for Clark an important *part* of the story.

The possibility of diverse resources acting as part of the cognitive system was originally highlighted in Andy Clark and David Chalmers' seminal paper, 'The Extended Mind', in which they proposed EM and suggested the Parity Principle as a rule of thumb:

If, as we confront some task, a part of the world functions as a process which, were it to go on in the head, we would have no hesitation in accepting as part of the cognitive process, then that part of the world is (for that time) part of the cognitive process. (222)

In 'Memento's Revenge' Clark elaborated that the external cognitive resource should also be 'reliably available and typically invoked'; 'more-or-less automatically endorsed'; and 'easily accessible' (6-7). Many critics and some proponents of EM misinterpreted parity as necessarily implying process-level identity; that is, that the

external cognitive resource (exogram) must act in the same way as the internal cognitive resource (engram). But in *Supersizing the Mind* Clark restates that the original idea of EM was, as suggested in the above quote, always only that the exograms must work in such a way that if it was internal we would count it as a cognitive process (77-78, 91). Clark has explained that it is best to consider the exogram having the same form of functionality 'as at most part of a sufficient condition for cognitive extension, rather than as a necessary feature' ('Author's Response' 99). External resources can also be radically unlike the internal ones, as Clark describes, the brain 'must learn to interface with the external media in ways that maximally exploit their particular capacities'; they can be 'alien but complementary' (*Being There* 220). Thus, whilst a computer, does not store or compute information in the same way as the brain, it can for that very reason be useful in supplementing neural capacities. Through their differences, as well as similarities, various forms of representational and computational resources can supplement biological limitations.

In consequence, EM places in question the meanings of the terms 'external' and 'internal'. Although used conventionally here as skin boundary markers, 'internal' in this context could instead be understood to refer to contributory factors to the cognitive system; in the same way fixed boundaries between the subject and the world are placed in question. John Sutton argues that the various forms EM resources can take allow us to: break down traditional boundaries between the object and subject; explore the heterogeneity of interactions; and analyse the boundaries between the inner and outer, and the natural and artificial 'as hard-won and fragile developmental and cultural achievements, always open to renegotiation' ('Exograms'). As Clark says, EM persistently invites and explores the question: 'Where does the Mind Stop and the Rest of the World Begin?' (*Being There* 213).

This key question of where the mind stops and the world begins is also evident in various early twentieth century influences on proponents of embodied, embedded and extended accounts, including briefly: Heidegger's human 'being-in-the-world'; Merleau-Ponty's connatural 'body-subject' whose consciousness of the world occurs through the medium of the body; and Vygotsky's educative and sociocultural 'Zone of Proximal Development', also known as 'scaffolding', in which the intrapsychological is a product of the interpsychological. Whilst there is insufficient space here to discuss the complexities of the theories proposed by these thinkers, the common element amongst them is their rejection of the traditional conception of the disembodied Cartesian *cogito* in favour of a view of human cognition as a predicate of our active engagement in the world. As with the other thinkers discussed in this

chapter they have in various ways led to the reconceptualisation of the mind as embodied, embedded and extended through the utilisation of the body, objects, words, or other social agents as elements of cognitive processing.

The following sections of this chapter explore a wide range of research that provides surprising evidence of the extent to which human cognition is materially, socioculturally and technologically constructed; it also reveals the neurological mechanisms that enable this cognitive flexibility. The examination of this evidence also addresses Adler and Gross' pertinent charge of the lack of actual scientific evidence given in literary studies that purport to use cognitive theory, by providing the scientific background behind the theoretical reconfigurations proposed (202). Our starting point in the next section is an examination of how the distributed nature of cognition in the brain relates to recent theories about polyphonic consciousness and how the illusory conceit of a singular stream of consciousness is linked to the illusion of an executive and autonomous subjectivity. This will be discussed later in relation to early modern conjectures about the brain, for whilst these had a considerably less well developed scientific basis, there is nevertheless evidence of comparable understandings of the brain's operations as distributed, fluid and plastic; and, then as now, this led to questions about the variability and the agency of the subject, and its opacity to itself as well as to others.

Mind, Consciousness and Self

As you sit there in your chair you are more or less aware of the feeling of your legs against its surface, of the surge and murmur of sounds in the room around you and beyond, of the meanings of the words along which your eyes flit, and of a multitude of other thoughts, incessantly and instantaneously forming and passing. Your eyes circuit the room before you focus back on the paper crinkling in your hands, as you try to ignore the faint buzz of your computer in the background, the vague urge to go and make a cup of coffee, and the crick in your neck. Tactile, proprioceptive, auditory, visual and language understanding experiences: these are just a few of the many modes of consciousness that you are experiencing now, as you check these words against your sense of your self, at this moment in time and against the continually adjusted narrative that stretches from the past into the future. Entering into the slim round of bone that encases your brain we discover that within it, your brain's myriad cognitive processes, that are simultaneously criss-crossing your neurological pathways, have varying levels of autonomy, some conscious and many

more non-conscious, and with varying degrees of direct or indirect interactions with other stimuli both within and surrounding you.

Here in the brain we begin the search for the elusive 'self' or 'subject',³ through an examination of theories of how brain processes work. One way in which the slipperiness of 'the subject' can be countered is by dissecting it into more manageable pieces; although this can mistakenly lead next to the question of in which of these 'the real' subject is. Similar difficulties plague the terms 'mind' and 'consciousness' as shall be seen. The intention of this section of the chapter is to present research that suggests that the self, or subject, does not exist solely in any particular piece, nor does it stop at the skull or skin boundary. Evidence for this lies in the plasticity and diversity of neurological and physiological processes and their co-opting of sociocultural and technological resources as part of the subject. By deconstructing traditional folk psychology models of the mind, consciousness and the self, the extent to which everyday talk of these concepts has created mirages of unified fixities is revealed.

An intense and complex debate in cognitive science continues over the nature of consciousness, and in particular about phenomenal consciousness, qualia, or the 'what-it's-likeness' of experiencing something, which also tends to be tied to the idea of being 'a subject', and especially of being a subject of a particular kind (Nagel 165-80). Explaining why there are qualia was famously described by David Chalmers as 'the hard problem' because of the difficulty of the questions of why and how subjective qualitative experience arises ('Facing' 200-3). Our inability to encompass the nature of the human mind in thought, and in particular the mystifying puzzle of conscious experience, continues to resist the scientific impetus that has led to the proposition of the wonder of a world and humanity created by evolutionary rather than divine processes. Concerning the disputes over qualia, Daniel Dennett comments: 'It is just astonishing to see how often "academic" discussions of phenomenological controversies degenerate into desk-thumping cacophony, with everybody talking past everybody else.' (*Consciousness* 67). In fact, this debate wavers hither and thither to such an extent that Clark declares: 'the word "consciousness" does not seem to aim at a single, steady target' (*Mindware* 171). A similar argument about the mind is observed by Clark and Jesse Prinz in their unpublished joint paper, which worries that it has become a 'terminally unstable term' since according to the diversity of tastes around, the mind was either being

³ It is worth mentioning at the outset, that the terms such as 'self' and 'subject' are sometimes used interchangeably in following different thinkers' and their disciplines' preferences; where explicit and useful definitions are made these will be given.

shrunk too small or bloated too big: 'there is no unified, coherent understanding of the very *idea* of "mind" at work in various philosophical and scientific projects all of which claim to be studying aspects of the mental' (qtd. in Clark, 'Memento's' 37). The too-small-for-some version, Clark suggests, would claim that the mind is restricted to the few neural structures that are arguably most directly responsible for our sense of self; this would locate your self as being a resident of the neural structure known as the anterior cingulate gyrus (*Natural-Born* 214). The too-big-for-others version is what Clark proposes and what is being argued for here: neural, biological, material, sociocultural, environmental and technological resources are dynamically involved in cognition and subjectivity.

The extended mind hypothesis has been influenced by the connectionist architecture of the brain, understanding of which in turn is based on recent neuroscientific discoveries about the brain's anatomy, and aptly these have largely been made possible by the development of more advanced technology. This increase in our knowledge of the brain originally came through lesion studies which allowed neuroscientists to roughly connect lesions in one area of the brain with certain mental defects caused, which thereby suggested their normal local functional specialisation, although this technique led to an overly modularised view of the functioning of the brain. Since then the progress of further research has literally added much more detail to our picture, through using new equipment with a broad range of temporal and spatial scales, such as: positron emission topography (PET), which maps chemical changes and blood flow; electroencephalography (EEG), which measures electrical activity; magnetoencephalography (MEG), which records minute magnetic fields; magnetic resonance imaging (MRI) and functional magnetic resonance imaging (fMRI), which detect increases in blood flow. In fact with the more powerful new fMRI equipment we no longer see just a snapshot, we can now see a mirroring of our brain in real-time action (Damasio, *Feeling* 14).

These new technologies have revealed that the brain works neither as a single network nor as a series of entirely independent modules, since the intraconnected areas of the brain are also dynamically interconnected and interactive. Within specialised modules (e.g. visual in the occipital lobe) more particular specialisation occurs within specific zones (e.g. colour at V4), but higher order processing often occurs when the information is sent back out again far across the brain (in this case to the TPO or temporal, parietal and occipital lobes' crossways) (Ramachandran and Hubbard 55). Yet, rather than strict modularization or localisation of functions, 'most brain areas participate in functions across several task categories', with, for example, motor areas participating in language and memory related tasks (Anderson 164).

Although diversity of opinion and fertile metaphors abound about exactly how the brain works, the general idea, as described by Clark, follows the connectionist model, with interlinked activations of a mass of parallel processing units that are distributed across the brain (*Mindware* 62-83). Synapses participate in both the cause and the effect of neural activity: patterns of neural activity are generated in response to excitatory or inhibitory inputs, caused by the synapses' modulatory effects, and this activity in turn modifies the synapses themselves. It has become accepted knowledge and a motivating force in neuroscientific research that experiences modify not only the activity but also the organization of neural circuitry. As Citri and Malenka state: 'One of the most important and fascinating properties of the mammalian brain is its plasticity; the capacity of the neural activity generated by an experience to modify neural circuit function and thereby modify subsequent thoughts, feelings and behaviour'(18). Mental representations, such as sensory impressions, are a dynamic pattern of activation whose data then disappear, having thus modified the extended network of connections where the implicit information is now superpositionally stored as an integrated trace. Sutton remarks this 'leads connectionists, in the extreme, to say that we never create the same concept twice', since a concept is never reproduced but always reconstructed. This fuels his persuasive suggestion that the context-constrained nature of remembering is 'specifically indexed to the cognitive system, body history, and current cues in which they occur' (*Philosophy* 8). Traces which structure the brain depend both on the body and the world in which it exists.

The philosophers, Gerard O'Brien and Jon Opie, draw on the connectionist model as a basis for their theory of consciousness ('Connectionist' 137). They describe how rather than a singular stream of consciousness, there are instead a mass of parallel tributaries, with many independent sites of instantaneous consciousness (146). O'Brien and Opie explain that our phenomenal experience is a 'complex *aggregate* of many elements' that are relatively independent of one another, so that if you close your eyes for a moment now, the other modes of consciousness will not also shut down; 'like the parallel tracks on a multi-track recording, the loss of any one mode of consciousness merely reduces the total sound' ('Multiplicity' 114). Instead of the centralised 'consciousness-making site', which has been favoured by some connectionists,⁴ they suggest that the feeling of polyphonic consciousness as unified arises from the spatial and temporal representational coherence produced by

⁴ For a well known example of a centralised consciousness-making version see Baars' 'Theatre of Consciousness' 292-309.

‘the confluence of points of view generated’. And they describe this flowing together as produced by ‘a serial stream of self-directed thought’: by a ‘self-maker’ (118).

The metaphor of multiple drafts of consciousness that are continuously being created by the semi-independent PDP channels is used by Daniel Dennett to make the point that there is neither a single narrative nor a canonical final draft (*Consciousness* 113). Similar to O’Brien and Opie’s ‘self-maker’, Dennett describes a linguistically created top-level ‘user-illusion’ or ‘Joycean Machine’ that creates the illusion of a single stream of consciousness (214). It spins an ongoing self-directed narrative that seems to fix cognitive contents into a serial stream of contents, although on a non-conscious level the multiple PDP channels are perpetually in motion:

There is no single, definitive “stream of consciousness,” because there is no central Headquarters, no Cartesian Theater, where “it all comes together” for the perusal of a Central Meaner. Instead of such a single stream (however wide), there are multiple channels in which specialist circuits try, in parallel pandemoniums, to do their various things, creating Multiple Drafts as they go. (253-54)

Like O’Brien and Opie, Dennett’s motivation in creating this model, was to counter the conventional ‘Cartesian Theater’ model of an observer or audience in the brain to which unconscious modules are sent for conscious appreciation (137). Another way Dennett attempts to allegorise and so facilitate communication of his understanding of consciousness is through describing it as ‘fame’ in the brain; the part of the neural structure which is acting itself becomes conscious of its action and then communicates it to other parts of the brain (*Brainchildren* 137-9). Thus, models of a human consciousness that is not singular or centralised are developing in tandem with the notion that a fixed executive self is itself generated as a functional chimera.

Clark points out that a rejection of ‘a central meaner’ is not in itself necessary to make the case for EM (*Supersizing* 131-33). Yet evidence relating to his technological contentions has nevertheless led him to argue that our being self-aware and narrative-constructing leads to the hallucination of an essential self which does not exist:

There is no self, if by self we mean some central cognitive essence that makes me who and what I am. In its place there is just the ‘soft self’: a rough-and-tumble, control-sharing coalition of processes – some neural, some bodily, some technological – and an ongoing drive to tell a story, to paint a picture in which ‘I’ am the central player. (*Natural-Born* 138)

According to models like this the human subject and mind is more opaquely complex than a straightforwardly linear narrative construction could imitate. Clark has 'John's Brain' explain: 'My single voice, then, is no more than a literary conceit.' ('I am' 147) Nor are non-conscious cognitive processes necessarily low-level, as Clark demonstrates with his reminder of the way seemingly magical, inspired or intuitive ideas have of 'popping up in our heads' (*Natural-Born* 134). Moreover, Clark and Chalmers point out that since 'all sorts of processes beyond the boundaries of consciousness play a crucial role in cognitive processing: in the retrieval of memories, linguistic processes and skill acquisition, for example,' it makes clear that consciousness is not equivalent to cognition (7). The fact that consciousness is internal is therefore no reason to deny that external processes can be cognitive.

The 'no self' theory arrived at by these theorists is clearly not just a variation on nihilism, which reifies emptiness into an oxymoronic 'solid absence'. Varela, Thompson and Rosch in their radical and influential book, *The Embodied Mind*, stress the importance of distinguishing between post-Nietzschean nihilistic thought and the discovery of a self-less mind. They advise that 'the discovery of mind without self' requires 'that we revise our naïve idea of what a cognizing subject is (its lack of solidity, its divided dynamics, and its generation from unconscious processes)' (127). An understanding of the mind as self-less enables both a dawning realisation of the automatic nature of habitual routines and that the self is co-dependent on the other: 'The realization of groundlessness as nonegocentric responsiveness however, requires that we acknowledge the other with whom we dependently cooriginate' (254). This is an ethical transformation, for an awareness of our interrelatedness to others leads to a deeper sense of our shared responsibility.

In *Natural-Born Cyborgs*, Andy Clark affirms the importance of the potential consequences of the extended mind theory for all sectors of society:

This is a confrontation long overdue, and it is one with implications for our science, morals, education, law, and social policy; for these are the governing institutions within which we – the soft selves, the palpitating biotechnological hybrids – must solve our problems, build our lives, and cherish our loves. (139)

However, Clark does not tackle the question of how his rejection of the traditional central executive self in favour of a coalition soft self can be made responsible within that society other than his implicit trust in the positiveness of acknowledging this as the true make up of the human subject. In response to Alice Juarrero's questioning of 'how responsible agency is to be fleshed out' (Juarrero 153), once it is allowed that it is 'tools all the way down', Clark concedes he does 'not have a good answer' ('We

Have' 179). His suspicions are that both the idea of selves and of moral responsibility are '*forensic*' notions that are not metaphysical necessities but rather 'a matter of habit and of practical convenience' (179). In respect to these notions, Judith Butler offers a method of moving forward which will be examined in the following chapter, but which can be related to Varela and his colleagues' theory that a self-less mind could lead not to negativity, but to an affirming of our co-dependence and collective responsibility. The ethical issues pertaining to a self which is mutable and multiple are raised again later in my reading of Shakespeare's works.

This section has presented some of the arguments made for the distributed and dynamic nature of cognition within the brain and examined how recognition of the illusory conceit of singular, unified and centralised consciousness is connected with the mirage of the autonomous narrative self. In addition, the participation of non-conscious processes in cognition prevents consciousness acting as an insurmountable distinction between biological and non-biological resources. The following two sections of this chapter provide evidence against brain-bound theories of cognition and subjectivity by presenting some of the key ways in which cognitive processes involve the body.

Embodiment and Neural Plasticity

Evidence is accumulating both of the manifold roles that the body plays in cognitive processes and of the plasticity of the body schema in the brain, which enables it to incorporate non-biological resources or extend the human subject beyond its biological periphery. This section examines some of that evidence, whilst also considering concerns that strong sensorimotor models may have thereby replaced a neural with a biological chauvinism. In later chapters this evidence will be compared with early modern theories about brain and body interactions, as even where dualist notions are explicitly pursued, somatic notions of psychology tend to provide the theoretical underpinning with physical processes typically understood as participating in the cognitive economy. Furthermore, as in current theories, except only in terms of collective concepts rather than on a neuroscientific basis, the plasticity of the body image of the early modern subject was one of the means which enabled the body's supplementation and transformation by non-biological resources.

Varela, Thompson and Rosch's book *The Embodied Mind* contributed to the reworking of this area of cognitive science, as they challenged earlier classical views of cognition as occurring through a computational manoeuvring of internal symbolic representations. Instead they emphasise our 'structural coupling' with the world,

claiming that 'cognition has no ultimate foundation or ground beyond its history of embodiment' (xx, 151). They define embodiment as composing a phenomenological and cognitive framework: 'embodiment has this double sense: it encompasses both the body as a lived, experiential structure and the body as the context or milieu of cognitive mechanisms' (xvi). Yet, whilst their reminder of the body's role in enacting cognitive processes is significant, they emphasize the body's importance to such an extent that the world as an independent entity is seemingly undermined by the subject's encompassing of it:

We reflect on a world that is not made, but found, and yet it is also our structure that enables us to reflect upon this world. Thus in reflection we find ourselves in a circle: we are in a world that seems to be there before reflection begins, but that world is not separate from us. (3)

This theory taken literally presents the world as apparently constructed by the embodied and enactive cognitive structures of organisms, with the found world apparently dependent on the human finder. To claim that there is nothing outside the body would not be an epistemological advance, and it strangely echoes the hubris of poststructural theories of language, which in the extreme posit that '*there is nothing outside of the text*' (Derrida, *Of Grammatology* 158); moderation in any such claims is necessary but eschewed by both these examples.

The theory of 'enactive cognition' has been developed by Alva Noë in his work on visual perception. In his book *Action in Perception* he explains that we do not need to ground ourselves using internal representations because we have the practical knowledge and bodily capacities to access this information from the world: thus, when we want to pick up a coffee cup we can use our eyes to guide our hand rather than relying on an internal model (24). Noë goes on to explain that although there is a lack of a commitment to the snapshot image stored internally, we nevertheless feel aware of the details of our environment, which seem present in the internal image although absent. This is because of our sense of virtual access to this information due to our possession of the sensorimotor skills needed to scrutinize the world for details. Noë explains that: 'To bring detail into consciousness, it is necessary to probe the environment, by turning your eyes and your head' ('Experience' 421). Thus, the enactive view of cognition presents evidence and theories that challenge current conceptions of the boundaries of the mind by suggesting ways in which cognitive processes involve the body.

Yet in various recent works Clark raises the danger that the emphasis on embodiment will lead to a 'new-wave-body-centrism'. Clark points out that there

exists a tension between models in which the body makes an ineliminable ‘Special Contribution’ and models such as EM, which present a ‘Larger Mechanism Story’. The ‘Larger Mechanism Story’ argues that cognitive processes can be realized through multiple different types of resources, not only corporeal ones (‘Pressing’ 37, 57). Clark critiques Noë, not for his view of perception as enactive, as this evidence he adopts as an argument for EM (‘Soft Selves’ 106), but for a ‘sensorimotor chauvinism’ that argues for the necessity of a human body for human perception (‘Pressing’ 56-7; ‘Cognitive’ 43-64). Such a strong sensorimotor model, Clark argues, is in danger of veiling the many quasi-independent forms of representation and processing that exist, with the result that it is possible to be ‘systematically insensitive to some of the goings-on at the sensorimotor frontier’ (‘Cognitive’ 64, 53). The distinction being made here is that whilst a body is required it is not necessarily a body ‘just like ours’ (‘Pressing’ 43).

Nor is it just humans who are capable of such fluidity concerning physical and identity structures. J. Scott Turner has shown in his ecological research that even basic life forms commonly use social and environmental offloading and he contends that ‘animal-built structures are properly considered *organs of physiology*’(2). Meanwhile, neuroscientific evidence, such as the experiments on the teletransportation of self-perspective by H. Henrik Ehrsson, reflects the increasing potential for manipulations of human physical identity. Ehrsson gives volunteers the illusion of first-person visual experience from the perspective of a life-sized mannequin by fitting them with a video headset, which tracked the room as if from the perspective point of the mannequin, whilst a researcher touched the dummy at the same time as the subject was touched. These multisensory correlations ‘are sufficient to determine the perceived location of one’s body’ and through the manipulation of these an ‘out of body’ perceptual illusion results, with the subject quickly coming to feel as if they are the mannequin and are viewing another person’s body rather than their own (1048). On the microscopic level, Hannah Landecker, whilst discussing the increasing potential for spatial and temporal flexibility of living cells, asks: ‘What is the social and cultural task of being biological entities – being simultaneously biological things and human persons – when the biological is fundamentally plastic?’ Thus, natural processes, as well as human’s increasing ability to technologically modify these processes, reveal human and animal nature, as adaptable and extendible into the world. What constitutes ‘human’ is constantly laid open to question by our tendency towards hybridity, recently most noticeably in relation to robotics, microprocessesing, nanotechnological, biotechnological and genetic engineering advances (see G. Gillet or Andrew J. Ross for further discussion of this topic).

Clark's concept that we are 'biologically based' but not 'biologically imprisoned' ('Soft Selves' 118) has been experimentally explored by Stelarc, an artist who through his use and incorporation of prosthetic devices has done much to challenge traditional notions of body boundaries. Stelarc explains:

A body's authenticity is not due to the coherence of its individuality but rather to its multiplicity of collaborative agents. What becomes important is not merely the body's identity, but its connectivity – not its mobility or location, but its interface and operation. (3)

Rather than a concept of the body as an entity that depends on unity or consistency, Stelarc suggests that the important factor is the body's ability to collaborate and connect. His point, like Clark, is that bodies do not necessarily stop at biological boundaries, but may be composed of, and extended by, non-biological materials.

Recent neuroscientific research provides evidence that 'the body' as it is imaged in the mind does not necessarily stop at skin boundaries, and in certain cases this can be accounted for by the fact that experience is productive of new neural growth. V. S. Ramachandran and D. Rogers Ramachandran demonstrated that new neural connections and the reorganisation of the brain can emerge in humans, through their experiments with amputee patients who experienced feeling in their missing limbs. Through the use of mirrors in a box that made it appear as if their missing limb was whole, patients went from feeling the missing arm to be painfully frozen in a tight fist, to experiencing movement and with it the cessation of pain, as a result of seeing their phantom limb reflected and apparently moving in the mirror ('Synaesthesia' 377-86). That sensation in the normal hand was referred to the phantom, shows the closeness of vision and proprioception interactions, and it 'implies that new pathways that are precisely organized and functionally effective can emerge in the adult human brain' (386). Thus, the adult brain remains sufficiently plastic that it is capable of creating new neural connections in relation to physical changes. Consequently our body schema is not fixed.

Another experiment by Berti and Frassinetti has shown that simply holding a stick meant that the brain caused a remapping of far space to near space due to this 'artificial extension of the patient's body' (415). Similar tests by Maravati and Iriki, involving monkeys using rakes have shown that the cells of the brain that would normally represent the fingers quickly come to map the area of the spikes of the rake. Prior to the ability to provide such evidence, claims about the plasticity of the corporeal and subjective schema were already being made in the 1940s by Merleau-Ponty. He describes a blind man's stick as 'an area of sensitivity, extending the scope

and active radius of touch, and providing a parallel to sight', as through habit we are transposed into instruments or incorporate them into the body (165-6).

Drawing on evidence that our body and our constructs of it coevolve, Clark highlights the significance of the negotiability of body boundaries and neural plasticity for EM:

...the biological brain can literally grow a cortical architecture suited to the specific technological environment in which it learns and matures. This symbiosis of brain and cognitive technology, repeated again and again but with new technology sculpting new brains in different ways, may be the origin of a golden loop, a virtuous spiral of brain/culture influence that allows human minds to go where no animal minds have gone before. (*Mindware* 153)

The considerable plasticity of the brain, Clark contends, makes evident that it is therefore 'at least *poised* so as to be able to co-opt *external* structures' ('We Have' 178).

Furthermore, just as objects may be experienced as body parts so body parts may be experienced as objects or tools. Clark and Chalmers give the example of using our fingers to count on (221-2). Clark also refers us back to our early years, reminding us that we had to learn how to control our body parts and initially also experience them as objects:

First of all, consider the child's own bodily parts. It is quite possible it seems to me, that these are first experienced (or at least simultaneously experienced) as objects in the child's world. The child sees its own hand. It may even want to grab the toy and be unable to control the hand well enough to do so. ('Memento's' 28)

Later, we learn to cause the correct kind of neural activity to make our limbs move as we intend; my fingers to tap the correct keys (most of the time), for instance. Clark and Chalmers offer as an example of the absence of any strict divide between material tools, body parts and cognitive processes 'the old image of the slide engineer with a slide rule hanging from his belt wherever he goes', as if it was part of him (224). As discussed in later chapters, in the early modern period it had become newly fashionable to have a small mirror hanging from one's waist or in one's hat; the significance of this fashionable appendage increases in significance when considered in light of the fact that tools can play a significant role as part of the cognitive economy. The puzzle of understanding how human thought emerges is not, Clark insists, a mind-body problem, but a mind-body-*scaffolding* problem (*Natural-Born* 11).

Embodiment and Emulator Circuits

Embodiment has not only become a topic of interest because of the body's role in enactive cognition and its extendibility into the world. Body-based input in cognitive processes also comes from the role of our body states and emotions in reasoning and social inference, and additionally reveals the role of non-conscious processes in conscious decision making. Hierarchical binaries that polarise reason and emotion, the body and the mind, conscious and non-conscious processes are thereby placed in question, as is any conflation of conscious agency with the human subject. In later sections this will be compared with a variety of early modern theories about the role of the emotions and body states in the subject, examining both those theories which seek to polarise reason and the emotions and those which believe or assume that they are dynamically interwoven.

The idea that conditioning or conscious cognition alone constitute reasoning and decision-making has been called into question through the demonstration of the participation of the emotions and the body in these processes. This development is particularly indebted to the works of Antonio Damasio, which have had widespread effects in terms of how human reason, emotions and embodiment are now understood. In *Descartes' Error* Damasio argues that feelings and emotions are linked into the loop of reason. Blood based networks of arteries and veins that carry biochemical signals are interwoven with neural networks of electrochemical impulses in the nervous system. Damasio explains that: 'Nature appears to have built the apparatus of rationality not just on top of the apparatus of biological regulation, but also *from* it and *with* it' (123). This is demonstrated by the case of Phineas Gage, who suffered an injury to his ventromedial prefrontal cortices in 1848; although he initially seemed unaffected, it became apparent that his personal and social behaviour were negatively altered. Recent studies of patients with ventromedial frontal region damage, similar to that which Gage must have suffered, have shown that this behaviour is caused by impaired reasoning abilities. Damasio and his colleagues put forward the 'somatic marker hypothesis', to explain the relationship between this region of the brain and our body states, and to explain the way emotional memories of sensed body states resurface to guide our later actions ('Somatic' 1413-20; *Descartes'* 184). The somatic markers may arise in the body proper, via a 'body loop', or just in the brain's representation of it, via an 'emotion/feeling loop', which he also calls an 'as if' body loop. These markers, or signals, arise both consciously as 'feelings' and non-consciously, when they bias choices without producing any conscious awareness of emotion. As Clark suggested of non-conscious processes

more generally, Damasio states of these non-conscious emotions: 'While the hidden machinery underneath has been activated, we may never know it' ('Somatic' 1416). In patients with this kind of injury, while their IQ, factual knowledge, language, basic attention and working memory remain unaffected, they exhibit abnormalities in decision making and in expression of emotion and experiencing of feelings. Therefore, Damasio proposes that the ventromedial prefrontal cortex 'holds linkages between the facts that compose a given situation, and the emotion previously paired with it in an individual's contingent experience' ('Somatic' 1414). These dispositional linkages reactivate the emotion by acting on somatic effectors or directly on somatosensory structures as if in an attempt to reconstruct an earlier concurrence of the event and the emotion. Thus, the 'gut reaction' caused, is based on our capacity to sense our own body states, which are experienced as being either pleasurable and appetitive or painful and aversive.

This hypothesis is borne out by a gambling test, conducted by Bechara and his colleagues, in which normal subjects displayed anticipatory skin conductance responses (SCRs) before choosing a card from a less favourable deck of cards, with higher wins but also overall higher losses.⁵ At first this SCR non-consciously biased their choices toward a better deck, then later in the game choosing the better deck was followed by the feeling of having 'a hunch', then finally there arose a conscious awareness of the better and worse choices of decks; whereas patients with ventromedial frontal region damage did not display any SCRs, or have a hunch, and even after consciously working out the better choice continued to choose from the worse decks as well (1293-95). This demonstrates that even with overt knowledge of the better choice, but without these non-conscious biases, which are physically measurable, advantageous behaviour is not ensured. By blurring the boundaries of reason, and showing it to be influenced by the emotions, the body and non-conscious processes, the idea that conscious rational mental agency is equivalent to subjectivity is called into question.

Andy Clark also laments the stress on reason as a kind of independent overseeing faculty. Joining Damasio here, he asserts that emotion is part of the mechanism of reason itself: for reasoning and deliberations are constrained through 'the automatic option-pruning and choice-influencing operations of the somatic marker system', which 'allow us to reason protectively, on the basis of past experiences' ('Artificial' 316) Damasio further argues that without our sensing of

⁵ SCRs are also known as Galvanic Skin Response (GSR): it calculates an index of arousal by measuring the electrical resistance of the skin, which is affected by the increased sweating caused by positive or negative arousal.

painful and pleasurable body states, 'there would be no suffering or bliss, no longing or mercy, no tragedy or glory in the human condition' (*Descartes* 'xxv). Moreover, through the correlation of the mental construction of a self with the feeling of emotions as being phenomenologically one's own, present and past body representations participate in this neural construct, as well as in the cognitive drama more generally. The role of body states and emotions in cognitive processes and subjectivity resurface later in discussion of similar early modern concepts.

Further evidence exists that the 'as if' loop that Damasio has described as occurring in the brain's representation of the body, is not one of a kind, as other circuits exist which emulate processes in the body and in the world. Whilst Damasio's 'as if' loop emulates body states, a variety of other 'as if' loops can similarly emulate body actions, visual imagery, and perception. Rick Grush suggests that Damasio's theory of the 'as-if loop' is a special case of his emulation theory of representation (394). Grush explains that 'in addition to simply engaging with the body and environment, the brain constructs neural circuits that act as models of the body and the environment' (377). During sensorimotor engagement these models, running in parallel, provide virtual feedback signals that correct an action as it takes place, with actual feedback arriving at a later point from the body and the environment, to correct current actions and modify future predictions (377). Emulator models can also run offline (that is, only in the head) for visual imagery and perception, and Grush hypothesizes similar mechanisms for reasoning, theory of mind and language. Yet arguably even where the model is head-bound these loops work effectively though being modified by feedback from the body and the environment, and through having received information from them. Clark applauds Grush's thesis for suggesting the close relation between internal representations and sensorimotor factors. However, in addition to 'head-bound emulatory strategies', Clark points out that humans frequently employ the world as its own model (instead of a mental representation), or where this is unavailable, for example, in the case of designing a new building, employ a drawn plan as a surrogate model. These 'environmentally extended emulator circuits' allow reason to operate in a 'disengaged but not disembodied' manner (*Supersizing* 152-6).

Thus, according to advances in neurobiological research, significant contributions are made to cognition by non-conscious processes, emotions and bodily states. In addition, the wider hypotheses of head-bound and environmental emulators, suggest that humans' ability to predictively and creatively represent and model outcomes, is entwined with their capacities and experience as embodied creatures in the world. Literature, the arena of this dissertation, can be understood as another

means of creating a representational domain for emulating reality, through the imagination's figural bodying forth of the words, or through an acted play literally bodying it forth in material surrogate forms. It will also be worth considering to what extent this notion can be compared with early modern understanding of the imaginative leaps of which the human mind is capable and with the understanding of the purpose and practise of literature and drama presented in early modern literary texts and works on rhetoric.

Word Mind Tools

The term 'mind tools' was invented by Richard Gregory, a neuropsychologist, in order to describe the important role of culturally inherited or designed artifacts which simplify solving problems and enhance intelligence. Words are distinguished by Gregory as a special category of mind tool, because of their particular importance to human cognition, and his term reflects the fact that neuropsychologists, cognitive scientists and philosophers sometimes refer to language as a kind of technology (48). Daniel Dennett adopts this notion of mind tools into his taxonomy of organisms: 'Darwinian creatures' are hardwired and evolutionarily changed; 'Skinnerian creatures' learn new strategies by reinforcement; 'Popperian creatures' use imaginative practice in advance; and 'Gregorian creatures' use inner models informed by constructs in their outer environment (*Kind of Minds* 112-34). The spectrum of types range from those changed over evolutionary timespans, to those who reach the highest category, we humans, whose brain shows us to be capable of adapting more quickly via external resources. Like Gregory, Dennett argues that the most important of the resources we are furnished with by culture is language, as it equips the mind with concepts, labels, and representational systems:

Navigation in the abstract multidimensional world of ideas is simply impossible without a huge stock of moveable, memorable landmarks that can be shared, criticized, recorded, and looked at from different perspectives. (194)

Language enables a soaring upwards of further reflections built upon one another, and can lead to 'an arms race of reflection' (158): I am thinking about what you will think about what I have written. It is through language that the human mind and notion of self emerge, and Dennett claims, through 'a radical restructuring of the virtual architecture of the human brain' it has placed humans 'far beyond all other earthly species' (220, 195). For Dennett, a fundamental and unique advance is made by language in our human kind of mind.

In explaining his understanding of the significance of language Dennett also adopts Richard Dawkins' term 'meme', which describes a unit of cultural transmission (such as a tune, an idea, a way of making pots) that is propagated by being transmitted from brain to brain (*Selfish Gene* 192, 196). In the extreme Dennett claims this could lead to the conclusion that: 'A scholar is just a library's way of making another library' (*Consciousness* 202). Dennett argues that meme evolution, like biological or genetic evolution is not necessarily for the good of anything, but suggests the extent to which human consciousness is a product of cultural evolution. Whilst various specialist parts of our brains are shared with animals, some of these have since been recruited for specifically human activities, and they are augmented by both the individual and the culture inhabited, as 'thousands of memes, mostly borne by language' inhabit and re-programme the structure of the brain turning it into a mind (254).

Although Clark follows Dennett most of the way, in terms of an emphasis on the dramatic effects of language on human cognition, Dennett's more emphatic distinction of humans' basic processing profile as transfigured by language, is modified by Clark who argues for more of a continuum between us and other animals, with our consciousness as differing from theirs 'only in richness of content and poise' (*Mindware* 176-81; 'Magic Words' 166-67). Language acts as a complementary human cognitive resource, but 'does not bring into being the basic apprehensions of pleasure and the sensory world in which the true mystery of consciousness inheres' ('Magic Words' 163-65; see also 'That Special' 187-205). Clark places stress on the similarity between humans and other creatures by emphasising that the tendency to transform oneself and to extend into the environment, as humans do via mind tools, is natural:

It is our natural proclivity for tool-based extension, and profound and repeated self-transformation that explains how we humans can be so very special while at the same time being not so very different biologically speaking, from the other animals with whom we share both the planet and most of our genes. (*Natural-Born* 10)

Our learning of tags and labels, Clark declares, is akin to learning *a new perceptual modality*, for it allows us to direct our thoughts on objects, rendering features of our world concrete and remarkable, which in turn enables 'a progressive cascade of more complex and increasingly abstract ideas' (*Mindware* 144-5). Clark argues that words, by freezing concepts or a piece of knowledge, allow it to act as a conceptual building block, from which can be built more abstract towers of thought; whilst this 'freezing' occurs to an extent, it seems important to remember that neither public or individual

linguistic concepts are entirely static, as like our memories, they change with every reconstruction. A historical instance of this mutability is evident in the changes that have occurred in words used to describe the mind and subject themselves, and this necessitates the consideration of how the mind and the subject have shaped and were in turn shaped by understandings of these terms. Thus whether the particular character of the resource itself has an effect is dependent on the particular context and instance of its use.

The idea that language is not just about communication, but also a developmental cognitive tool, was originally proposed in the 1930s by the psychologist Lev Vygotsky. Vygotsky argued that the regulation and guidance of children's behaviour by adults, through language prompts, acts as scaffolding for their learning of new information or actions. Children integrate these prompts, by learning to employ self-directed and inner speech to control their own cognitive behaviour. This theory has since been proven in a series of experiments carried out by Laura Berk and various colleagues, who have shown, for example, that when a learner attempts to repeat a previously demonstrated task, they will be more attentive and successful if they rehearse the assistant's instructions to them (Elias and Berk 218). The implication of this theory in which communicative interactions precede internal development, is that social interaction is necessary for a subject's full development of the higher cognitive faculties, including the formation of concepts.

Rumelhart and his colleagues follow Vygotsky's lead in this area, as they describe the way cognitive processes can be informed by external instruction or by the internalisation of external linguistic representations:

We believe that the process of following instructions is essentially the same whether we have told ourselves or have been told what to do. Thus even here we have a kind of internalisation of an external representational format. (47)

They also contend that externalising instructions through talking to oneself, has the same effect as writing on paper: it assists in the solving of difficult problems and at the same time, they point out the significant blurring between 'external' and 'internal' that occurs, since 'we ourselves produce the external representation' (47). I take issue with their former point upon the equivalency of writing and speaking, since distinctions between mediums can be an important factor in the heterogeneity of interactions, with, for example, the particular cognitive tools in use contributing to the distinctive character of individual cultures. In his book, *Orality and Literacy*, Walter Ong describes writing as more statically frozen than speech through its graphic materiality, whereas speech disappears into the air (although it may also be

visualised in our literate minds) (32). And yet, their claim for parity, if taken in terms only of the general implications that language has for subjects, does hold true. For in all cases, whether externalised through writing or speech, or rehearsed internally, it involves a doubling of the cognitive message that increases the clarity of the thought and the focus of attention.

In *Supersizing the Mind*, Clark draws on evidence that language is a hybrid resource with both biological and sociocultural origins. He employs research on the origins of mathematics to demonstrate how this works: humans have a biologically basic capacity for approximate reasoning and to understand the concepts of 1, 2, 3, and a vague more-than-that-ness, but through the linguistic resources of numbering humans also have the capacity to learn that specific number words relate to distinct quantities (50). Previously Clark suggested that language is as biologically proper for humans as the web for a spider, whilst writing straddles the divide between the biologically proper web and the artefact crane ('Magic Words' 182). Following this logic further in *Supersizing* he proposes that this means that the biological organism spinning webs of cognitive scaffolding is therefore '*organism centred even if it is not organism bound*' (123). Yet arguably, whilst language contributes to our construction of an illusory centralised self, through its intersubjective and sociocultural character it also contributes to our distributed and decentralised nature. Intimate forms of sociocultural and linguistic interfacing are so habitual they are often invisible to us; right now 'my' words on the page are resounding in your mind. These words leave the permeability of boundaries between us revealed by their fluidly intersubjective operation, between people, and intrasubjective operation, within a person. To argue that cognitive processes are not just formed through the mind and the body but also by technological, sociocultural and environmental interactions, in my view entails that humans oscillate between centring and decentring forces, and are subject to contingency.

Within the field of cognitive linguistics, the theory that our everyday conceptual language is not only metaphorical but generated by our embodiment has proved widely influential. This theory is most closely associated with Lakoff and Johnson, and as with Alva Noë, they have been criticised by Clark for a body-centrism which claims that human-like bodies are necessary for human-like minds ('Pressing' 42-3). Since in my view, our making the abstract concrete operates through cognitive processes that are decentring as well as centring, I would also question the generalisation that: 'The grounding of our conceptual systems in shared embodiment and bodily experience creates a largely centered self' (*Philosophy* 6). Lakoff and Johnson's concept of language tends not only towards body-centrism, but

also to a concept of a centred self, and in my view this can lead to overly universalising and homogenising tendencies. They focus on a fixed construct of embodiment and argue that the mind and body are metaphorically understood as containers: 'It also assumes the MIND IS A CONTAINER metaphor, which establishes continuity between the mind and the body—both being CONTAINERS' (*Metaphors* 148). Lakoff and Johnson's insight into how humans tends to conceptualise non-physical domains in terms of physical ones is helpful, and Ramachandran has discovered some evidence concerning body based metaphors, as in his experiments with patients who have lost the ability to perform complex skills there is also a loss of understanding of the metaphors related to them ('Marco'). Yet, as has been discussed in this chapter, the fluid adaptability of the most plastic creature on the planet, the human being, means that there are also a whole range of other metaphors for conceptualising minds and bodies. The persisting tension between notions of the subject as physically constrained and as porously interconnected with, and physically and cognitively extending into, the world will be discussed in later chapters in relation to early modern and Shakespearean concepts.

Lakoff and Johnson distinguish between 'the self' and 'the subject', with the higher reflective subject mainly taking the role of judging the acting lower private inner selves, which in turn divide simply into a true self and a not-true self that is disowned, as in 'I was not myself yesterday' (*Philosophy* 278-79). Thus they allow that the self is not singular, consistent or reason-led, yet recreate a cognitive and territorial inflexibility in contradiction to the flexibility of our peripheries, extending their notion of being human only as far as the next container of a Russian doll type self by positing a centralised embodied self whose cognitive processes and identity stop at the skin boundaries. Aspects of their theories remain of interest and to the extent that neurophysiological processes are common in structure in all humans there does exist a universality; however in that commonality the distinction between each of us is eroded by what is shared, in conflict with their 'self as container' metaphor. Whilst it is praiseworthy that Lakoff and Johnson have made evident the role of the body in language, it seems ironic that a theory concerned with language, arguably one of the most significant resources in extending human cognitive processes beyond the body and in contributing to the illusion of a centralised self, has thus limited itself to the domain of the body in constructing its own theory.

Whilst for EM language is understood as having biological origins, and as occurring within an embodied being, it is not dominated by this embodiment, any more than language has domination over our basic biological capacities. As this chapter has described, the middle way charted by Clark is that language's cognitive

role is complementary to our basic biological capacities, but that the dramatic consequences of this resource are akin to the human race having learned a new perceptual modality. Clark's theory of language presents interesting contrasts and comparisons with psychoanalytically influenced literary theories which will be explored in the next chapter. The relations of both of these types of theories to early modern and specifically Shakespearean depictions of linguistic representation are discussed in later chapters of the thesis.

Phenomenology versus heterophenomenology

In the 1970s, Thomas Nagel raised important questions concerning the nature of consciousness and subjectivity, that still continue to occupy philosophers and cognitive scientists, and that have insight to offer in understanding subjectivity. They tackle the abiding problems of private versus public, and of what can and cannot be inferred by a third-person point of view about first-person intentionality. Nagel's landmark essay 'What is it like to be a bat' in his book *Mortal Questions*, argued that objective third-person psychological accounts leave out the subjective nature of conscious first-person phenomenal experience: the 'something it is like' to be me, or to be you, or to be a bat (170). In addition, since 'our own experience provides the basic material for our imagination', he argues that the imagination's range is therefore limited (169). Thus, he suggests that whilst phenomenological facts can be objective to an extent, since one person can say of another what they infer their experience to be, it is subjective to the extent that the more different from oneself the other is, then the more difficult it is for us to adopt their point of view:

The distance between oneself and other species can fall anywhere on a continuum. Even for other persons the understanding of what it is like to be them is only partial, and when one moves to species very different from oneself, a lesser degree of partial understanding may still be available. (172)

Nagel contends that since our subjective experience is apprehended from a particular point of view, so any shift to a greater objectivity about that phenomenon 'takes us farther away from it' (174). This is congruent with a sense of self explored in early modern texts and claimed by tragic Shakespearean subjects, such as Hamlet and Richard II, as will become apparent in later chapters. Are we then necessarily returned to the subject as a mysterious monolith on account of this theory of irreducible subjective experience, or should we treat irreducible qualia as an illusion? The approach to this question adopted within this thesis, follows Ronald de Sousa's

paper 'Twelve Varieties of Subjectivities', which breaks down the subject into a dozen constituent parts, demonstrating that whilst there can be a particular way it is to be a subject, it does not necessarily entail that there must therefore be a monolithic unified subject that experiences it.

In relation to subjective experience of oneself, Nagel explains that:

My feeling-of-being-me may well be different from anyone else's analogous feeling, and indeed is likely to be insofar as it supervenes on a number of factors that determine different aspects of our experience of ourselves. (174)

These different aspects of experience involve, for instance, the spatio-temporal particulars of perspective which contribute to the distinctness of tone of one's own experience. Yet, as de Sousa points out, although part of the reason that people use the concept 'I' is to formulate their uniqueness, actually 'part of the reason that they have this concept is because they are not unique'. De Sousa then elaborates his standpoint on the issue of whether someone without phenomenological experience would be a zombie. A zombie in the philosophical sense is someone with no phenomenological experience, who is indistinguishable from otherwise similar creatures with it: the questions asked are whether there could be such creatures and what the implications would be (if any). De Sousa suggests that if it were possible for a creature to exist who could participate in your every experience except your qualia, then your qualia would be an incidental by-product of no interest or causal purpose:

....if you can imagine some being whose reactions to a given scene (sound, sight stimulus, or whatever) are like yours in every possible way, including synesthetic, associative, recollections evoked etc.) can you really imagine that this being might *not* be like you merely in lacking qualitative experience? If you can, then subjective consciousness, as such, is strictly epiphenomenal in a sense so strong as to make it "a concept that has no utility whatsoever" (sic)

De Sousa's argument (which culminates in a quote from Dennett) is that qualitative experience operates through inner and external processes and is inherent to them, rather than existing as transparent or transcendent qualia. Combined with extended mind ideas this leads to my conclusion that subjective experience must be linked to the experience of phenomena caused by the amalgam of our psychophysiological underpinnings with our sociocultural and technological context. As Clark puts it:

In place of this elusive essence, the human person emerges as a shifting matrix of biological and nonbiological parts. The self, the mind, and the person are no more to

be extracted from that complex matrix than the smile from the Cheshire Cat. (*Natural-Born* 198)

In *The Bounds of Agency*, the philosopher Carol Rovane, similarly to de Sousa, argues that phenomenology is not evidence of an individual unified personal identity and, she goes on to suggest, therefore does not preclude the possibility of overlapping persons, who can jointly share in beliefs and desires and participate in the actions necessary to bring these about: people can overlap although their consciousnesses do not (207). As concerns this breaking down of the subject, Nagel himself admitted the possibility that:

...our simple idea of a single person will come to seem quaint some day, when the complexities of the human control system become clearer and we become less certain that there is anything very important that we are one of. (164)

Thus, for the subject, I would argue, even with and in fact *because of* all its patchwork construction, there is 'something that it is like' to be you.

Nevertheless, there is also value in Dennett's response to Nagel and other theorists who have insisted on a first-person phenomenology: the theory of heterophenomenology, or third-person phenomenology. In *Consciousness Explained* he argues that it is as if some philosophers are attempting to create an insurmountable 'objective subjectivity' (136). This indicates a potential flaw in Nagel's theory, since as Dennett explains someone may himself be mistaken about what he has experienced. A person can claim with certainty that something is like something for him, even if it is not actually as he thinks it, and even if he will later misremember it. Dennett gives the listener/ reader leeway to doubt the reporter of his own phenomenological world: you are in fact only authoritative 'about what seems to be happening in you' not 'about what is happening in you' (96). In *Kinds of Minds* he also proposes that in humans the habit of adopting an 'intentional stance', (viewing behaviour in terms of mental properties) spreads 'to cover both other-interpretation and self-interpretation'; which suggests that some of the same processes are used to fathom our own and others' mental properties (159). This implies a shared mechanism for making inferences about our own and others' mental experiences. Meanwhile, Timothy D. Wilson charts the discrepancy between the many human judgements, emotions, thoughts and behaviours formed by unconscious processes and the reasons confabulated by our conscious selves (106). This discrepancy for Dennett suggests that the subject's phenomenological world is a self-created and self-creating fictional theory, which can therefore be investigated for an

explanation of why it exists, rather than remaining an insurmountable 'hard problem' due to something that is irreducibly only subjectively available. This belief in an objective subjectivity he suggests is a consequence of the Cartesian cogito, so that 'perhaps we are fooling ourselves about the high reliability of introspection, our personal powers of self-observation of our own conscious minds' (*Consciousness* 67). Within Shakespeare's works both first-person and third-person phenomenologies are explored and their reliability questioned, suggesting forms of this dilemma that emerged in the early modern context, and these are explored in later chapters.

The fact that there are arguably species- and individual-specific perceptions of the world, does not dictate that these perceptions do not therefore participate in the flux of the pre-existing world. Hayles, describing the consistencies, as well as the discrepancies, between her dog Hunter's and her own perceptions has suggested the model of 'constrained constructivism'. The consistencies argue against radical subjectivism and solipsism; communication can take place across gaps between species and individuals since there is a shared reference within the world. At the same time, acknowledgement of the discrepancies and the refusal to abstract to universal laws from an anthropomorphic perspective, guards against a falsification of how our perceptual processes operate and the belief that 'reality is static and directly accessible' ('Constrained' 29-31). This perspective liberates us from the notion of representation as inert objective mirroring, without necessitating a claim that there is nothing outside representation (40-41). Following Merleau-Ponty's view of situatedness as enabling knowledge rather than acting as a barrier to it, Hayles argues that:

Constrained constructivism has this double edge: while it implies relativism, it also indicates an active construction of a reality that is meaningful to us through the dynamic interplay between us and the world. Renouncing omniscience and coercive power, it gains connectedness and human meaning. (41)

The argument for a heterogeneity of perceptions and experiences of the world, which however does not vary so wildly as to preclude commonalities, and which moreover has a point of reference outside of the perceivers, provides a basis for two-way relationships between oneself and others and between oneself and the world, whilst acknowledging the necessary limitations and biases of a human or individual perspective.

Clark, in his latest book, suggests that given the insensitivity of epistemic skills to the full range of sensorimotor information, 'then the perceptual experience of differently embodied animals could in principle be identical, not merely similar to

our own' (*Supersizing* 193). Whilst I would agree with the potential for consistencies in specific contexts and in relation to specific explanatory principles, arguably differences would necessarily appear across different parameters. Expanding on Hayles' theme, to illustrate this claim, consider my dog and me perceiving an unfortunate rabbit. Whilst on a base level my dog and I both know a rabbit is there, the specifics of our perceptions pertaining to it wildly differ, in ways that may or may not have a bearing, since a dog is colour blind, can scent and hear the rabbit's movements (possibly even its heart beats), while I may only visually perceive the rabbit, which I name in language, as it turns for its burrow, having itself perceived us. Clark's desire to avoid biochauvinism or speciesism has perhaps pushed his claim for potential perceptual consistencies too far, and risks instead an obfuscation of the heterogeneity pertaining between species and individuals. That for Clark, the importance of heterogeneity and particularity is not negated is clearly evident elsewhere in his work, nor need my disputation of this suggestion undermine a belief in the central EM parity principle, that posits only that if a part of the world functions as a process which would be accepted as cognitive were it to go on in the head, then it is for that time part of the cognitive process (*Supersizing* 77).

It seems that belief in subjective particularity of experience does not necessitate belief in a monolithic unified subject that experiences it; neither does it preclude the possibility of decentralised and overlapping persons, nor the value of heterophenomenological accounts. In addition, I have argued that subjectivity whilst constraining access to reality does not condemn each one of us to solipsism: representation is situated in relation not only to subjective perceptions and experiences, but also to shared human characteristics and to the world. Furthermore, in my view, representational systems that are referenced both to ourselves and to the world, through retaining both negotiability and representationality, create an open ended and interactive system, which fundamentally contributes to humans' propensity for transformation and creativity.

Mirror Neurons and Extended Subjectivity

Rizzolatti and Craighero's paper 'The Mirror-Neuron System' describes the astonishing discovery of a brain system which provides further evidence that our cognitive processes are not exclusively centred within a container subject: 'Mirror neurons represent the neural basis of a mechanism that creates a direct link between the sender of a message and its receiver' (183). Originally discovered in Macaque monkeys' premotor cortices using electrodes to record single neurons, the mirror

neurons fire both when the monkey performs an action involving an object and when it perceives another performing the same action: it is *as if* the monkey is watching itself in a mirror. Mirror neurons have not been as precisely identified in humans, due to the difference in techniques used, with the result that many researchers instead refer to a 'mirror neuron system' or 'mirror system' in humans (Rizzolatti and Sinigaglia 124; Niedenthal 1003-4). The brain-imaging and neurophysiological experiments in humans suggest that our mirror neuron system is much more diverse and complex: it fires when another subject performs transitive and intransitive types of action and codes the movements making up an action. This ability to internally simulate actions viewed in another has been linked to the social aspect of human cognition, as it contributes to our ability to imitate and understand another's actions. Inspired by Merleau-Ponty, Rizzolatti and Craighero propose that the motor 'resonance' of visuomotor mirror neurons translates visual experience into an internal 'personal knowledge' (179). In addition, the echo-mirror-neuron system, located in the speech-related motor centres, resonates when a human listens to verbal material, and leads to the capacity to replicate sound produced by others (Rizzolatti and Craighero 186-7). Rizzolatti and Craighero's conclusion is that the mirror neuron system contributes to both social organization through action understanding and to human culture through imitation learning.

These may seem tall claims, and doubts have been raised not only about the theoretical claims but also about their neurological basis (Turella et al.). Yet the multitude of papers exploring the workings and potential implications of mirror neurons for understanding aspects of human nature, suggests that whilst stricter constraints may be needed, Ramachandran's prediction may come true:

I predict that mirror neurons will do for psychology what DNA did for biology: they will provide a unifying framework and help explain a host of mental abilities that have hitherto remained mysterious and inaccessible to experiments. ('Mirror Neurons')

The most significant claims about mirror neurons over the decade following their discovery in 1996 were presented in Rizzolatti and Sinigaglia's book *Mirrors in the Brain*. In addition to the mirror mechanisms already mentioned, Rizzolatti and Sinigaglia also mention the discovery of mirror systems in humans for primal emotions, such as disgust, fear and pain, which means that there is a common neural base for experiencing and perceiving these emotions. This forms a necessary condition for empathetic (rather than colourless) processing in our inter-personal relationships; an *as if* loop between our own and others' emotional experiences (173-193). The mirror neuron mechanism 'embodies that modality of understanding which,

prior to any form of conceptual and linguistic mediation, gives substance to our experience of others' (193). Rizzolatti and Sinigaglia conclude that our behaviour and social relations are vitally contributed to by the mirror neuron mechanism.

The Preface to *Mirrors in the Brain* opens with the authors' referring to the theatre director Peter Brook's comment 'that with the discovery of mirror neurons, neuroscience had finally started to understand what had long been common knowledge in the theatre' (ix). The theatre makes use of the ways the actors' embodied movements, sounds and facial expressions are animatedly participated in by the spectators. Arguably Clark's extension of Grush's emulation models, as also operative via environmental scaffolding, holds implications for understanding the dramatic realm as well. The theatre is a particularly powerful form because operating as a 'dramatic emulator circuit' it can combine biological mirroring mechanisms operative in the social realm with the fluidly intersubjective and intrasubjective nature of language which also enables our imagination to model and occupy different realities via 'linguistic emulator circuits' (These are both my suggested terms).

Calvo-Merino and his colleagues carried out a noteworthy experiment, which is also mentioned by Rizzolatti and Sinigaglia; however neither party discusses the full significance of the experiment's implications in terms of the potential constraint it suggests on the mirror mechanism and interpersonal subjectivity. In this study it was shown that the intensity of the firing of the mirror neuron system was greater in individuals who had specialised experience of the type of action, ballet or capoeira, which was being performed, than was evident in the inexpert control subjects. Calvo Merino and his colleagues conclude that: 'Our results show that this 'mirror system' integrates observed actions of others with an individual's personal motor repertoire, and suggest that the human brain understands actions by motor stimulation' (1243). Therefore, whilst mirror mechanisms can be seen as bringing into question the full extent of Nagel's claim as to the incommensurability of phenomenological experience, yet this experiment partly bears it out through demonstrating that we will experience more closely actions we have experienced ourselves already and which are in our own motor repertoire. Whilst mirror neurons provide evidence of a vehicle that biologically extends human subjects, the mental state does not remain identical across first and third-person boundaries without the intervening factor of shared first-person experience.

A more general neuroscientific study by Agloti and his colleagues also suggests that specific enactive subjective experience frames future experience. Their study on action anticipation and motor resonance in trained basketball players, demonstrated that 'the fine-tuning of specific anticipatory 'resonance' mechanisms' endow elite

athletes' brains (and not novices or coaches) 'with the ability to predict others' actions ahead of their realization' (1109). Thus, whilst mirror neurons indicate the potential for considerable sharing of various types of experience across persons, this evidence suggests that there is also considerable particularity of subjective experience, and that enactive cognition plays a significant role in forming our cognitive repertoire and mirroring potential. Subjective experiences of the world are made up of a rich and dynamic mix of shared consistencies and particular divergences.

A theoretical account which suggests not only consistencies between perceiver and actor but also the constraints on their sharing of experience is the late Susan Hurley's 'shared circuits model' (SCM) which aims to explain how imitation, deliberation, and mindreading can be enabled (1). Hurley proposes that cognitive mechanisms allow perceivers not only the sharing of experience but also distance from the actor through inhibitory mechanisms. These are also supplemented by modelling mechanisms, and together they free humans from path dependent learning, and underlie our ability to parse intentions and recombine structures, rather than simply copy them. Furthermore, Hurley suggests that this 'recombinant flexibility' may have influenced our ability to construct linguistic structures which, via grammatical syntax, allow us to flexibly recombine words in order to create endless metamorphoses of meanings (7-8). Thus Hurley proposes that it is precisely on account of the subpersonal mirroring in humans, without any distinction between action and perception or between self and other, that further monitoring and inhibitory mechanisms are necessitated on the personal level in order to prevent an undifferentiated flux between self and others. These contribute to the particular human sense of being an individual, by making apparent the distinction between our own versus others' actions and perceptions. The combination of the ability to share circuits and to differentiate between our own and others' circuits enables humans to predict and simulate reasoning about our own and others' actions, and about the cause and effects of those actions (16-19).

Marco Iacobini in his commentary on Hurley's paper posits that the recent discovery of 'super mirror neurons' which have a modulatory role over mirror neuron activity, by inhibiting overt copying, is one of the mechanisms which allows the distinction between self and other to emerge (30). Andy Clark and Julian Kiverstein's response (on Hurley's behalf) to peer commentary concludes that what is particularly striking about this model is the suggestion that the human mind is 'fundamentally social, as an evolved organ not of solipsistic individual cognizing, but of social and communal *co-cognizing*' (52). This turns much of current debate on

its head by suggesting that to an extent 'the problem then is not so much how to learn about the minds of others, as how to separate her own mind from the minds of others' (51). Although in *Supersizing* Clark also notes Kim Sterelny's argument that mind-reading capacities are developed through culturally and artifactually scaffolded training (67-68). The issue of reading one's own or another's mind and conversely of the leakiness, blurring or lack of boundaries between the self and other(s) are dominant themes in early modern and Shakespearean depictions of subjectivity, whose concerns this theoretical and scientific background here suggest have in part a neurophysiological and in part a sociocultural basis .

Another of the pertinent areas in which the mirror neuron system has acted as theoretical catalyst is in understanding the use of gestures. In *Hearing Gestures* Susan Goldin-Meadow demonstrates that, as with language, gestures are not just about communication but act as a cognitive prop. Her analysis of learners' use of gestures has shown that they enable the performance of more complex tasks by freeing up other aspects of cognitive effort and allowing a redescription of the task. Through the double medium of gesture and speech multiple representations of a single task are possible, with gesture itself allowing for both visuo-spatial and motor representations: gesture is seen, forms shapes and trajectories, evokes images and is felt as an embodiment of thought by the speaker and, through mirror neurons, by the listener (185).

Goldin-Meadow acknowledges the influence of David McNeill's work on gesture. In *Gesture and Thought* McNeill develops the idea of language as 'an imagery-language dialectic' that requires two simultaneous modes of thought (92ff.). McNeill defines Vygotsky's concept of a 'material carrier' as 'the embodiment of meaning in a concrete enactment or material experience', in order to advance the notion that in the motion of gestures there is offered a supplementary dimension of meaning (98). Speech and gestures coevolved each one contributing to the other's further development and both act as thinking in one of its many forms (99). The reason this thought-language-hand link exists, McNeill conjectures, is due to the human capacity to respond to our own gestures as if they belonged to someone else, and this he hypothesizes is enabled by mirror neurons:

Mirror neurons could be the mechanism of this gestural self-response. We can posit a self-response via one's own mirror neurons and hypothesize one's own gestures activating the part of the brain that responds to intentional actions, including gestures, by someone else, *and thus treats one's own gestures as a social stimulus*. (250)

In more general terms, Ramachandran has posited a similar model in relation to mirror neurons and self-awareness, in order to explain this paradoxical 'turning inward' aspect of the self. He suggests that self-awareness uses the mirror neuron system for 'looking at myself as if someone else is looking at me' ('Neurology'). As with McNeill's and Hurley's theories, this reverses the conventional model, which depicts theory of mind (TOM), the awareness that others have beliefs and desires on which their behaviour is based, as developing out of a pre-existing sense of self. Instead he posits that awareness of others was internalized into introspection: 'the TOM evolved first in response to social needs and then later, as an unexpected bonus, came the ability to introspect on your own thoughts and intentions'.

In the later sections there will be an exploration of social and self-reflexive mirroring in Shakespeare's time, with discussion of early modern awareness of the use of another person or thing as an extension of oneself, in particular as a recursive means to self-knowledge; these I have respectively called 'extended subjectivity' and 'extended reflexivity'. These terms are used to describe the mechanism by which objects, environments, and other people, contribute to and participate in a person's subjectivity and self-knowledge. Mirror neurons are changing our understanding of self-other relations and invite questions about first-person versus third-person access to our own and others' subjective experience. In texts circulating around the time that Shakespeare was writing, notions of subjectivity and reflexivity as extended are widely evident: as implicit or collective assumptions, as inventive and playful conceits, and through coming into conflict with notions of autonomous individuality.

Particularly pertinent to the notion of an extended subjectivity is Stephen Kosslyn's concept of 'social prosthetic systems' (SPSs). On the *Edge* website he defines SPSs as other people whom we 'rely on to extend our reasoning abilities and to help us regulate and constructively employ our emotions'. He explains that another subject who becomes your SPS, 'literally lends you part of their brain', so that 'other people's brains come to serve as extensions of your own brain'. Kosslyn credits mirror neurons with helping us develop our social prosthetic systems, and suggests that we need these social systems for the same reason that Clark explains that we employ technological and sociocultural resources: because our brains are limited. He suggests that humans are evolutionarily motivated to participate in such systems because their 'self' thereby becomes distributed over other people, who may either help with a shared immediate short-term goal or serve as a long-term prosthetic system ('On the Evolution' 547). Whilst Vygotskian ideas are concerned with the internalisation of social scaffolding, Kosslyn's SPS hypothesis advances the

idea that other people participate in the operation of our cognitive processes through being invoked as more or less reliable supplements to our memory, our reasoning, and our emotional faculties. Although the term SPS might seem to emphasize an artificial crutch-like function, Kosslyn argues that SPSs are enabled by neurological structures and may have evolved from more basic evolutionary survival goals (*Edge*); SPSs are made possible by and required because of the existing properties of humans rather than being ad hoc add ons.

In 'Memento's Revenge' Andy Clark comments that other people would not typically endorse Otto's notebook as a cognitive supplement as automatically as he does himself, believing that he knows something if it is written in the notebook. Clark goes on to suggest that the fact that Otto does not typically worry that tricksters tamper with his notebook entries is another reason for considering it to be a cognitive resource ('Memento's' 7, 34). Prefigured here are a couple of the concerns that plague the use of other people as an extension of your mind: the possible unwillingness or inability of one subject to hold as valid or even to comprehend another subject's point of view and one subject's interest as potentially in conflict with that of another subject; although since similar issues may plague our own relations with our multiple different selves, this is not a reason not to consider other people as cognitive resources. In his most recent book, Clark's argument in relation to epistemic artefacts would also apply to SPSs. He argues that since such artefacts exist in shared interpersonal space they are potentially more open to deceptions and manipulations, but to the extent that we do not treat our perceptual inputs more cautiously than we do information from our internal input (the potential unreliability of which has been discussed), they should count unproblematically as part of the cognitive economy (*Supersizing* 102-4). Indeed, Clark optimistically envisions a future in which rather than you having to read all these words printed on paper, we could simply hook up and you could directly channel this thesis (*Natural-Born* 127-28). And already, the 'complex reciprocal dance' of brain and techno-sociocultural environment is described by Clark as one in which our humanity plays out 'in concert with other brains' (87). This section has explored the ways in which the human mirror neuron system contributes to an awareness of our own and others' minds and suggests a basis for human empathy and theory of mind. This complex brain mechanism contributes to humans' ability to operate skilfully in our socially complex societies and to human's intimate and dynamic coevolution with their sociocultural and technological scaffolding.

Conclusions

The research discussed in this chapter reveals the embodied, embedded and extended nature of human cognitive processes and subjectivity. This invites the reappraisal of contemporary forms of literary theory and of concepts of human cognition and subjectivity in other historical periods. This chapter has presented a wide range of evidence that supports the claim that neurophysiological structures have an impact on cognition through conscious and non-conscious processes, through willed and autonomous subsystems, and through plastic and evolutionarily hardwired processes. The distributed nature of the mind, the fluid and plastic nature of the brain and the vital cognitive roles of the emotions, body states, and functions invite questions about the opacity, variability and agency of the subject.

The perspective proposed is that human beings extend themselves and their cognitive processes out into the worlds around them through biological, technological, and sociocultural resources. What is immediately evident is the necessity of wariness of the marginalisation of any particular resource's roles, through employing interrogatively different perspectives on the way humans exist in the world. Also evident is the opening to question of individualist, hierarchical and reason-centred structures in our own and other societies, which shore up the myth of a strictly demarcated, fixed and monolithic human subject. The adoption of EM as a theoretical basis is not an invitation for it to dominate literary interpretation, since my understanding of literature as in part a type of emulationary model, suggests that one of literature's values lies in it being a means of creating representational domains, which can imaginatively play with and disrupt explanatory paradigms.

In my view, human cognition and subjectivity are subject to both centring and decentring forces, both in terms of its biological and its non-biological resources. Language is a particularly significant resource, which is both centring and decentring. This chapter has explored Clark's view that language is a new perceptual modality that builds on natural tendencies to exploit environmental resources; so that although it sets humans apart from other species, we retain much in common with other animals. Combining this with Hayles' concept of 'constrained constructivism', the view has been set forth here that representation is referenced to perceptions, experiences, language and the world. Additional evidence from emerging research on mirror neurons indicates both the potential for particularity of subjective experience, as well as the sharing of experience across persons, with a rich and dynamic mix of shared consistencies and particular divergences between beings.

These ideas will be explored in later chapters in relation to early modern and Shakespearean texts' expression of views about the body and mind, character and sexuality, language and memory, and individuality and social relationships. First, in the following chapter there is an exploration of this topic, in terms of the potential relation between EM and various psychoanalytical, cognitive and literary theories that influence analysis of texts. This exploration sets out to determine what kind of relationship could exist between these types of readings and where points of variance may be irreconcilable, and yet nevertheless valuable, in allowing for fertile readings of polysemous literary texts, texts that are themselves steeped in diverse and conflicting paradigms that assume or seek to explain the complex nature of cognition and the subject.

Extending Literary Theory and the Psychoanalytic Tradition

The extended mind hypothesis by its very title assures us that it does not restrict itself to conventional or limited notions of the mind, but incorporates into its focus both the human subject and the world. For this reason, it is worth considering how EM might interact with theories concerned with the nature of the human mind that have more commonly been employed in literary readings. This second chapter is, like the first, theoretically motivated, as it sets out to establish the potential relation of EM to literary studies, in order to suggest a basis for the use of this theory for reading literature. The primary focus here is on the various intersections of EM related research with the psychoanalytical theories that to a lesser extent influence the reading of texts in this thesis. Psychoanalytical theories are commonly concerned with human decentring by the unconscious or by language, and they provide various modes of understanding the formation of the subject, its sexual identity and its social relationships. This chapter opens with three sections which briefly consider: the interdisciplinarity of literary studies and of EM; EM's hybrid straddling of the divide between the arts and sciences; and lastly EM's relation to psychoanalytical and new historicist literary theories. The discussion will then focus on psychoanalytic theory and its particular relation to EM, following a chronological trajectory from Sigmund Freud's splitting of the self, via Jacques Lacan's constructions of subjectivity and textuality, to Judith Butler's critical miming of Freudian and Lacanian propositions and positing of her own. Finally, the closing section of the chapter considers the potential relation of EM to stances taken so far by cognitive literary studies towards psychoanalytical and postmodernist literary theory.

Interdisciplinarity

Many forms of cultural and literary theory continue to be stimulated by postmodern continental philosophers, and amongst those, particularly by Foucault, Derrida and Lacan who, despite numerous significant differences in their approaches and ideas, all display concern with the relation of culture and discourse to the construction of the subject through questioning the finiteness of boundaries between the subject and the structures within which it operates. These philosophers share with extended mind proponents the belief that thought arises from preconditions that a thinker is born into. There is also a shared involvement in linguistic theory: continental philosophy and

postmodernism are marked by an emphasis on the constitutive powers of linguistic structures, while earlier classical cognitive theories focused on the role of syntax and information in computational processes. For instance, Keir Elam describes a trend in 1970s and 1980s literary criticism, which focuses on a semiotic system of linguistic codes (141-42); this is a parallel to early cognitive science's syntactically focused theories. There are grounds for seeing a relationship between literary theory and EM in terms of their claims about human sociocultural and linguistic extendedness.

Literary study has always been characterised by interdisciplinarity. Terry Eagleton reminds us that there is no 'literary theory' that arises from or relates to literature alone:

None of the approaches...from phenomenology and semiotics to structuralism and psychoanalysis, is simply concerned with 'literary' writing. On the contrary, they all emerged from other areas of the humanities, and have implications well beyond literature itself. (*Literary* 1)

That this interdisciplinarity should and already does stretch beyond the realm of the humanities is reflected in Alan Liu's call for the humanities to recognise its necessary relationship to technology; as reflected in the entwining of their etymologies, with 'technology' deriving from the Greek *techne* or 'art' and 'poetry' deriving from *poesis* the verb 'to make'. Liu suggests that just as the humanities have made use of technical methodologies since the close reading techniques of the Russian Formalists (although in the following chapters it is evident the link goes back further), so 'technical competence need not be oblivious to the sense of history that is the primary means by which the humanities at once reinforce and critique culture' (18). N. Katherine Hayles' latest book, *My Mother was a Computer*, is such a project as Liu demands, as it analyses the proliferation of computational codes and digital media and analyses their contemporary artistic and ethical implications: "What we make" and "what (we think) we are" coevolve together; emergence can operate as an ethical dynamic as well as a technological one' (243). This thesis shares with Liu and Hayles a concern with the intimacy and historicity of interactions between what humanity thinks it is and what it produces, whether literary, material, or indeed, itself. The interdisciplinarity of literary studies thus reflects literature's involvement in and reflection on the multiple factors that make up life: it is therefore a cause of celebration rather than concern that literary readings do not finish, but only begin, with the close reading of texts.

Like literary studies, EM invites a multidisciplinary hybridity on a theoretical level. This is particularly evident in its claim that humans are natural-born cyborgs.

The idea of the cyborg can tend to echo ideas familiar to us from popular sci-fi renderings, as something exotic, other, and futuristically threatening; something that wants to be us or rule us, rather than as something that we should be at ease with that we already are. Yet the image of the cyborg has also been usefully employed in feminist theory as a mechanism to challenge patriarchal domination, feminist organicism and hierarchical binaries. One example of a more complex application of the idea of the cyborg is offered by Donna Haraway's work. Haraway explains that whilst from one perspective 'a cyborg world is about the final imposition of a grid of control on the planet', from another perspective it could be 'about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints' (154). Haraway argues that the aim is to see from both a positive and negative perspective the possible outcome of our technological developments: 'The political struggle is to see from both perspectives at once because each reveals both dominations and possibilities unimaginable from the other vantage point' (154). Double, or, indeed, multiple perspectives, which can be illuminated through theoretical arguments, experiments or literature, are complementary components in the process of understanding our technologies, our selves and our world.

The scientific study of mind thus demands interdisciplinary effort and multidisciplinary cooperation on a whole new scale, probing adaptive response at multiple organisational levels including those incorporating bodily, cultural, and environmental scaffolding. (Clark, *Mindware* 160-161)

EM invites and extends literary theory's openness to incorporating interdisciplinary perspectives, by inclusively considering the complementary roles of technological, sociocultural, biological and environmental resources in cognitive processes and the creation of human subjects.

Yet an emphasis on interdisciplinarity also raises the provocative question as to whether literary theorists are therefore merely parasites on other disciplines. Rather, in my view the types of paradigms adopted by literary theorists are particular instances of evolving explanatory models; for example, postmodernism is a manifestation of relativism. Through employing the current manifestations of explanatory models for understanding the world and the self, both the contingencies and continuities with earlier manifestations become visible in literary readings. Following Mark Robson, I understand literature as one of the ways in which we make sense of the world and literary criticism as a means of making sense of how we make sense of the world (7). Literary criticism is a means of reflecting on the

reflections of ourselves and the world wrought by the imagination and on what the specifically human activities of reading, writing and engaging with literature tell us about being human. This invites open and complex readings that critically reflect back onto the very critical paradigms employed in our reflections. Literature and literary theory are not then parasitical on, but instead both reflective and productive of, new imaginings and understandings.

Arts and Sciences

In spite of the interdisciplinary basis of literary criticism, questions about the disciplinary antagonism of the arts and sciences are of long standing, dating back at least as far as the 1880s when T. H. Huxley's assertion that natural science was responsible for modern civilisation was countered by Matthew Arnold's emphasis on the greater necessity of the moral and aesthetic training of the liberal arts. The oppositional relationship between the arts and sciences was concretised in 1959 into that of 'two cultures' by the chemist-turned-novelist C. P. Snow. He depicted a hierarchical dichotomy with literary intellectuals hostile to scientific and material progress dominating positions of power. F. R. Leavis' aggressive response to Snow was ironically taken as reinforcing the dichotomy although, as Guy Ortolano argues, his actual intention was to critique the complacency of modern civilisation (and of Snow) rather than science itself (Ortolano 161). A more recent instance of the troubled relationship between the arts and sciences is the Sokal affair, the most renowned event in the 'Science Wars' of the 1990s. The journal *Social Text* published a paper by the physicist Alan Sokal that he later revealed was a satire of relativist approaches to science in order to highlight the flaws of postmodernism; since postmodernism has been highly influential on literary theory, the door was open for literary intellectuals to interpret this as an attack on their discipline. Sokal later argued that this was not intended as a generalized critique of the humanities or social sciences, but only the excesses of French postmodern intellectual practices (xi). It was fuelled not by antagonism towards the arts but by a desire to critique epistemic relativism. The point of fracture here is the invoking of fixed or pre-existing categories against proponents of relativism. This fracture line is a major cause of current tensions between the arts and science, as reflected in the roll call of Sokal's critiqued, which includes Lacan, Kristeva and Irigaray, along with other French postmodernists influential within literary theory. Postmodern relativistic and social constructivist viewpoints which repudiate anything purporting to be a fact and which argue that social forces are primarily responsible for human concepts and behaviour

have dominated recent literary theory, seemingly putting it at odds with most scientific discourse.

EM may offer a fruitful line of negotiation between these two positions. In contradistinction to most theories, it takes a middle path between scientific fact and social construct, arguably leaving space for the acknowledgement of both pre-existing categories (such as 'gene') and social categories (such as 'citizen'), and moreover exploring their mutual entanglement. As an instance of this, EM does not cast the biological body as merely occupying a single category, but acknowledges the role of both scientific and social categories in the body's make up and in its diachronic evolution. Furthermore, whilst certain scientific categories such as genes may be classed as pre-existing, EM implies that like their social counterparts, they are nevertheless subject to the history and evolution not only of the individual, the species, and the world, but also of the terminologies and frameworks used to describe them; they are representative but not transhistorical categories. EM thus invites engagement between the arts and sciences and an acknowledgement of their shared ground as well as their differences: both utilise and interrogate accepted conceptual categories, and dare to imagine new forms, terminologies, and frameworks for thinking about the mind and being human. In concert, the arts and sciences offer multiple perspectives on these issues and encompass all aspects of being human in the world.

Psychoanalysis, New Historicism and EM

Extended Mind theory invites a rethink of attitudes and assumptions about the mind and subjectivity. This is why much of this chapter concentrates on the relations between EM and that old stronghold of the mind, still influential in literary theory and in the popular imagination: psychoanalysis. But in literary criticism, psychoanalytical literary readings have come into conflict with new historicist literary readings, since the latter's emphasis on specific sociocultural contexts and power structures seems incompatible with a theory which at least in its earliest Freudian form posited ahistorical structures. Carla Mazzio and Douglas Trevor chart the tensions between the two theories, whilst noting that since the late 1990s there has nevertheless been an increase in works that involve cross-pollinations, with a psychoanalytical turn to issues of historicity and new historicism's turn to discourses of interiority (2). They also note that psychoanalysis and new historicism share terminologies, listing as recurring terms in both: anxiety, alienation, desire, otherness, fetish, and symptom (3). In fact, this is not surprising since new historicism as a

theory was influenced by post-structuralism's insistence on each period having its own knowledge system, an insistence that emerged not only from Foucault's works, such as *The Order of Things*, but that was also influenced by Lacan's emphasis on the disciplines of psychoanalysis and history as 'sciences of the particular' ('Function' 22).

Ironically, an implicit emphasis on the need for epistemological relativism has been applied at a metatheoretical level by critics of new historicism. Mazzio and Trevor note that postmodernism has produced criticism against new historicism's widespread influence (2). For instance, Louis Montrose argues that new historicism's predominance in the 1990s put it in danger of stifling critical discourse with its 'fixed and homogenous body of doctrines and techniques' (392). This is a threat that has arguably been evaded by the cross-pollinations that have latterly arisen and it suggests the vitality of future literary studies may lie in consciously implementing and combining diverse theoretical strands.

Charges of anachronism made against modern readings of early modern texts appear equally applicable against EM readings of earlier literature. Consider the charge made by Margreta de Grazia against the interpretation of early modern subjectivity (personified by Hamlet) in accordance with the latest understanding of subjectivity. De Grazia comments: 'What we have after 1800, then, is a long tradition of finding the most recent modern understanding of consciousness in the answer to the question 'Why does Hamlet delay?' ('Hamlet's' section 4). Juliet Fleming applauds de Grazia's calling 'attention to the universalising tendencies of contemporary historicist criticism' which 'reads the Renaissance as a version of "the Early-Now"' (section 1), but does not question the validity of de Grazia's own evidence. De Grazia applies to the first critical work on *Hamlet* for her interpretation; however this dates from 1736. Given that *Hamlet* was written circa 1600, a parallel might be the use of criticism written in 2005 to interpret a play written in 1869, which hardly constitutes proximity in the human scale of time. Cultural theory has been working away from the concept of time as progressing toward a superior present day, as is reflected in de Grazia's own critique. But perhaps we should also reconsider the possibility of resonances between different ages that are not fixed by their proximity in years.

Evelyn Tribble advocates that contrary to being anachronistic, EM effectively calls for historically situated studies, because of 'the shifting and unstable boundaries between inner and outer, engrams and exograms, thought and cognitive artefacts' ('To Ease'). In fact, far from being anachronistic EM is a useful means of reminding ourselves of the cognitive significance of manifold different factors

operating in different times and places, which causes diverse interactions between the mind, the body and the world. In these interactions, and in the beliefs of different historical and geographical contexts, we can trace features which are unique to a particular time as well as those which are common to our own. Indeed, de Grazia's critique can itself be seen as emerging from the oscillating movement in critical trends between emphasis on disjunction or on continuity with the present, which is described by Lynn Enterline and David Hillman (64). Hillman goes on to suggest the need to move beyond this dichotomy, since both the familiarity of this time out of which our own evolved and its distance can be seen as productive of interpretive insight, as well as a limitation (64). Hillman suggests the apposition of early modern and psychoanalytical discourses enables the emergence of concerns shared by both, such as the (in)accessibility and instabilities of selves and others (65, 67). Whilst EM shares in the view of (in)accessibility and instability of selves and others, it is without the sense of anxiety, lack and death that pervades the psychoanalytical framework; therefore EM's apposition with early modern discourses invites the emergence of insights into the celebration or non-conscious belief (rather than anxiety) of human extendedness in the early modern period. EM's unremitting optimism about human extendedness may be understood as both a strength and a limitation in understanding early modern subjectivity; for on this issue EM focuses on only one side, the other side of which emerges from the psychoanalytical tradition and its darker view of human extendedness. Evidence of this and of other comparisons and contrasts will emerge in the following discussions of Freud, Lacan and Butler.

Thus, EM is a particularly useful theory for studying literature because of its hybrid ability to straddle the divide between postmodern relativism and the fact based sciences, to welcome input from many disciplines in considering human cognition and subjectivity, and in its historical sensitivity to the material contexts of other periods. What is intended in the following sections is a general consideration of how psychoanalysis may be brought into discourse with EM. Nevertheless, given the focus of this thesis on Renaissance and Shakespearean thinking about subjectivity, it is worth mentioning another potential problem with psychoanalytic literary theory. Stephen Greenblatt contends that it is not advisable to use psychoanalysis to analyse Renaissance texts since a subject of that period appears to be a product defined by his communal environment, whereas according to psychoanalysis the subject, he asserts, is instead defined by his psychic condition and viewed as the creator of his environment, therefore psychoanalysis is an inappropriate tool (*Learning* 131-45). In the following analysis ranging from the early twentieth century to current discussions

of psychoanalysis, I hope to show that this reading of psychoanalysis is a limited and in fact an ironic account of this field. It is through psychoanalysis that previous assumptions about the subject were initially enabled to be countered in the twentieth century: for it is in large part through influential psychoanalytical writings that the realisation re-emerged that humans are not the unified autonomous reason-led and bounded subject imagined by the Enlightenment, and that the subject is constructed by, as well as constructive of, his environment.

Freud and Beyond

As well as being the father of psychoanalysis, Freud might also be considered one of the founders of neuropsychology. (Broks 27)

Sigmund Freud made a number of claims that bear on interpretations of cognition and subjectivity in general, and which through their later reappraisals by Lacan and Butler have been wrought to a form that invites discourse with EM. Freud famously conceptualised divisions within the mind: the ego, the id, the super-ego and the ego-ideal. These divisions between different parts of the psyche at once divided and multiplied the subject within and against itself; breaking down any assumption that cognition or subjectivity are equivalent to unified consciousness. In 'The Ego and the Id' he distinguishes between the id as the container of the instinctual passions and the ego as the representative of reason and common sense, with the ego attempting to tame the wilful id (636). Later works such as Damasio's on the emotions, discussed in the previous chapter, have demonstrated the operation of the emotions in rational decision-making and so attest that it is mistaken to draw such a rigid boundary and hierarchical relation between them. Nevertheless, Freud describes the ego as 'a bodily ego', 'a mental projection of the surface of the body', and as being 'essentially the representative of the external world, of reality', which provides evidence of a Freudian understanding of a transposition of the mind on the body and the world on the mind (636, 643). Freud's conception of the bodily ego as a mental projection seems to prefigure Damasio's 'as if' body loop, the mental representation of the body in the brain. Indeed, Damasio has written that:

Freud's insights on the nature of affect are consonant with the most advanced contemporary neuroscience views...I have proposed (without thinking of Freud but coincident with him), that the body, real, and as represented in the brain, is the theater for the emotions, and that feelings are largely read-outs of body changes "really" enacted in the body and "really" constructed in an "as-if" mode in body-mapping brain structures. ('Commentary' 38-39)

Freud's description of the ego as an agent of external reality also resembles Vygotsky's concept of the internalisation of external scaffolding. Freud's expansion of this theory with the introduction of the ego-ideal, or 'who-you-want-to-be', and the super-ego, or 'who-you-ought-to-be', as introjected parental identifications, further blurs boundaries between the subject and its social context (637-45).

However, if we consider in more detail Freud's depiction of a child's developmental course, which begins with the auto-erotic stage of illusory union with the mother, and is then followed by a narcissism that forms the ego, prior to the development of object relations, it is evident that Freud is biased towards the primacy of the internal, which thus places him in conflict with EM. In 'Beyond the Pleasure Principle', he depicts the ego as originally being formed in relation to itself prior to social relationships and reverting to this relation through trauma in secondary narcissism. The secondary sexual or 'life instincts' are an inversion of the same drive that fuels the primary ego or 'death instincts', as 'all instincts tend toward a restoration of an earlier state of things' via death, the post-coital cessation of excitation, or the production of copies (612-3). Both these instincts are conservative and were originally brought into this living state by the action of 'external disturbing and diverting influences' upon organic inanimate matter, and any higher development of matter was similarly caused in this way (613). Thus the development of consciousness, it is suggested, was caused by external influences, although Freud attempts to repress the significance of the external, by having the narcissistic ego's relations to itself as primarily formative.

Also problematical for recent critical thought is Freud's description of the development of object relations. This involves the mutually exclusive norm of a child's identification with the parent of the same sex and desire for the parent of the opposite sex, and thus posits as natural a distinction between desire and identification ('Ego' 640). Freud consequently elides homosexual desire or even the fact that desire for and identification with another may be coincident. This is the well-trodden ground of feminist critiques that have revealed the shallow foundations of Freud's oedipal structure as based in his society's androcentricism rather than the universal he asserts, of which Shoshana Felman provides a persuasive critique:

Freud who for the first time freed thought from a certain conception of the present and presence-to-onself, whose notions of deferred action, of the unconscious, of the death instinct, and of the repetition compulsion radically undermine the classical logic of identity, remains, nevertheless, himself a prisoner of philosophy when he determines the nature of sexual difference in function of an *a priori* of sameness, that is, of the male phallus. (9)

Undermining the classic logic of identity is a step in the direction towards enabling us to rethink the subject; but, in Freud's case, his mind extended out into the particular world he lived in, and then imagined that the hierarchical structures within that world represented universals. Thus, Freud broke through the misperception of the inviolable unified subject, but then created a rigidly sexed and narcissistic subject in its stead, a subject who only wanted to return to what Freud had seemingly deprived it of, an integrity and coherency which it could find now transiently through sexual or sublimated artistic reproductions of itself, but finally and completely only through death.

The connection of EM to the Freudian legacy has been scathingly noted by one of its opponents, as Stevan Harnard blames the EM hypothesis on too many 'years of Freudian faith in the existence of alter egos co-habiting your head' (503). The neuroscientific evidence employed by EM discussed in Chapter 1 unexpectedly draws it even closer to Freudian hypotheses. V. S. Ramachandran, for instance, describes his surprise that his neuroscientific discoveries in fact support and advance core Freudian ideas, such as repression (*Phantoms* 152-6). Indeed, both he and Damasio sit on the advisory board of the journal *Neuro-Psychoanalysis* launched in 1999 to advance collaboration between neuroscience and psychoanalysis. These disciplines' shared interest in explaining the mind's functions, calls for the sharing and reconciliation of the insights of a century of psychoanalytic enquiry with the new neuroscientific insights (Solms and Nersessian 3). For although neuroscientists have tended to be suspicious of Freudian theories, due to the extent of hypothetical theorising (of which Freud himself was aware and which was necessitated by his living prior to the technological advances that enable modern neuroscientific studies), neuroscience's recent studies in traditionally Freudian areas have led some to reconsider what could be usefully learned and integrated ('Beyond' 623). The recent neuroscientific turn to Freudian areas has attracted attention even from the mainstream press, in which an article by the neuropsychologist Paul Broks noted:

Modern neuropsychology provides compelling evidence for unconscious mental processing. For example, it can be shown experimentally that the behaviour of brain-injured patients can be influenced by memories that are unavailable to conscious recollection. (28)

However, Broks naturally warns against unreservedly taking up Freudian conceptions, and adds that he is only one figure in what is a long history of thinkers about the 'dynamic, unconscious mind', amongst whom he lists Shakespeare (28).

This will be the focus in the later sections of this thesis: to explore what particular form conceptions of the mind take in Shakespeare and his contemporaries' texts, and how EM and reinterpreted psychoanalytical theories, such as Freud's, can open up our reading of them.

The Subject and Language in Lacan

Jacques Lacan's reformulation of Freudian ideas has also had a continuing influence upon literary studies, particularly because he combined Freudian theories with a transformation of the structuralist concept of language popular in the mid-twentieth century. Lacan follows Freud, in terms of presenting a hierarchically gendered system as a universal and in dismissing notions of a transparent or autonomous subjectivity, the latter view being borne out by the neuroscientific research harnessed by EM. As with EM, Lacan explores the role of external factors on the human mind and subject. Yet in contrast with EM, Lacan expresses anxiety rather than optimism about the extendedness of human subjectivity.

In one of his most famous papers, 'The Mirror Stage as Formative of the Function of the I', Lacan describes psychoanalysis as having led him to 'oppose any philosophy directly issuing from the *Cogito*'; an opposition to the notion of the mind as reliant on purely inner resources that is shared with EM (1). In this paper Lacan develops his theory of the formation of the ego and the inauguration of the child into the imaginary order, through its misrecognition of a specular image as itself. The agency of the ego is fixed in a fictional direction, with the ego's narcissism paradoxically fuelled by the child's identification with the internalised image. This was a relational account that was intended to represent the relation of man to the world (Evans, 'Introductory' 114-16):

What did I try to get across with the mirror stage?...The image of his body is the principle of every unity he perceives in objects...all the objects of his world are always structured around the wandering shadow of his own ego. ('Dream' 166)

Thus the ego acts as a perceptual and cognitive constraint and its relation to exteriority and interiority appears unstable and uncertain. Judith Butler describes this passage as invoking the ego as 'an interior alterity' and 'an object of perception' and also since imaginary she describes it as 'neither interior or exterior to the subject' but a perpetually negotiated site of 'identificatory relation' (*Bodies* 75-6). Lacan depicts the image of the body as a site of projection and identification, with the unmanageable body itself the source of this misrecognition. Where Clark describes a

baby's experience of its own body parts as if they are unwieldy tools it has to learn to use, Lacan pessimistically pictures the same phenomenon in terms of an experience of motor uncoordination that is connected to a feeling of uneasiness and insufficiency ('Mirror' 4). Lacan asserts this is caused by the prematurity of human babies and reveals the 'primordial Discord' that he believes structures relations between humans and nature. This leads to the human 'assumption of the armour of an alienating identity' and the possible reappearance in dreams of Bosch-like phantasies of disjointed limbs (4).

Lacan describes the next stage as our inauguration into the symbolic order through language, although again this is not strictly speaking a developmental stage since language exists prior to our entry into it, with the subject inscribed into it at birth 'by virtue of his proper name' ('Agency' 148). Language is not only the tool man carves up his perceptual world with, but as with Dennett's 'user-illusion', it is also the means by which man himself is formed: 'It is the world of words which creates the world of things...Man speaks therefore, but it is because the symbol has made him man' ('Function' 39). Words are described as being self-referential, and as with Dawkins' memes, are forms that self-replicate and have their own evolutionary history. For Lacan, words are the primary force that determines human birth, destiny, character and death, and they are our final judge:

Symbols in fact envelop the life of man in a network so total that they join together, before he comes into the world, those who are going to engender him "par l'os et par la chair" [by bone and flesh]; so total that they bring to his birth, along with the gift of the stars, if not with the gifts of the fairy spirits, the design of his destiny; so total that they give the words which will make him faithful or renegade, the law of the acts which will follow him right to the very place where he *is* not yet and beyond his death itself; and so total that through them his end finds its meaning in the last judgement where the *verbe* [word] absolves his being or condemns it...(42).

Lacan further asserts that reason is produced by words, rather than words being the product of reason.

Like Clark, Lacan describes language as being a powerful shaping force. Yet the difference between the two thinkers is signalled in Clark's use of the natural metaphor of mangrove forests (that grow from floating seeds and by trapping debris in their roots create the land on which they stand) to describe the way in which words can create thoughts, instead of the conventional notion of pre-existing thoughts creating words ('Magic Words' 171-76). In contrast, Lacan developed his theory of language by adapting the already non-organic model of language developed by Ferdinand de Saussure, which described language as a system of signs in which

arbitrary signifiers (sound images) refer to each other and to the signified (concepts) rather than to things in the world (Saussure 65-70, 113). Clark and Lacan share a parallel belief in language as fundamentally contributing to human capacities and subjectivity, yet whilst for Clark this is not threatening, in Lacan's works it appears an alien and tragic necessity. Whilst the more analogical model of EM traces the relations between culture and nature, the psychoanalytical tradition is linked in with a non-organic model of language, which creates models that emphasise a gap between nature and culture.

Derrida, whose theory of language also continues along the lines of the non-organic model with the endless play of the signifying system and the absence of a referent in the world, accused Lacan of following in the Western epistemological tradition from Plato through to Saussure of phonocentrism, which emphasises the power of the spoken over the written word (*Postcard* 478). Here it seems it is Derrida, in his championing of grammatology ('a science of writing'), and in arguing that the written word is not a secondary or inferior substitute to the spoken word (*Of Grammatology* 74 ff.) who prefigures Clark's insistence that we increase our awareness of the benefits of all our technologies:

After all, our single most fantastically successful piece of transparent cognitive technology—written language—is not simply a poor cousin of face-to-face vocal exchange. Instead it provides a medium both for the exchange of ideas (and more importantly) for the active construction of thoughts. (*Natural-Born* 109)

Yet, Derrida's accusation of phonocentrism does not hold true, for Lacan too was alert to the advantages offered by the various modalities of language; for instance, he stressed the tightening up of meaning enabled by writing in comparison with the formative effects of speech ('Agency' 147).

Lacan's comparison of his work with early cybernetics makes vivid further conjunctions and disjunctions between his vision and that of the cognitive sciences and EM. The first wave of cybernetics, was sparked by the post-war Macy Conferences and was contemporaneous with A.M. Turing's landmark article 'Computing Machinery and Intelligence', best known for the claim that a Universal Turing machine could perform any well-defined computation through attention only to syntactical information. The stress on this possibility, in turn shaped how human brains and subjects were being interpreted. One emphasis lay upon intelligent computation as the defining factor of being human-like. Having considered early cybernetic theory, Lacan instead presented an assimilative system in which language is the machine, which 'through its combinations already governs' whilst processed

humans are 'thrown into it' and 'caught up in its gears.' ('Psychoanalysis' 306-7). For Lacan, it is therefore an 'illusion to seek the reality of the subject beyond the Language barrier' ('Function' 72). The symbolic order acts like a 'sumbalon', that is 'an impression in wax' or a 'seal', and unlike the Saussurean sign 'the signifier enters the signified'; famously as gendered urinal signs that demarcate gendered bodies ('Function' 35, 119; 'Agency' 151). Humans' attempts at self-making, are controlled by the imaginary and symbolic orders, which make us cogs in their machine.

This also appears a skewed version of the early cybernetic dream and a dark prefiguring of the second wave of cybernetics, especially Maturana and Varela's concept of homeostatic autopoietic (self-making) and allopoietic (other-making) processes. They describe social as well as biological and mechanical systems as working in a recursive and closed autopoietic manner; except when a system is made to subordinate its functions to those of a larger system allopoietically (xxix-xxx, 48). In Lacan's theory, man is not an information processing device, but its processed message, and his self-making system is necessarily caught up in an allopoietic system beyond his control. Lacan's works reflect his reaction against American psychoanalysis of the 1950s, whose intention was to create the integration of the ego within the individual and the harmony of the individual within society. This reaction against the 'corporation man mentality' then evident in behaviourism's attempt to market a unified subject ('Function' 6-7), is later echoed in Varela and his colleagues' intention that *The Embodied Mind* counteract a tendency to 'the economic view of the mind' and resist attempts to market the possibility of mental transparency and consistency in an autonomous subject (245-7).

Lacan expounds that man's identity is founded on a fiction that involves alienation. Unlike Descartes' '*Cogito ergo sum*', he creates a split between thinking and being: 'I think where I am not, therefore I am where I do not think' ('Agency' 166). EM, along with several of the theories discussed in Chapter 1, similarly suggests the operation of a 'user illusion', a narrative construction formed partly through the internalisation of intersubjective discourse. Yet, for Clark our existing and our thinking are not polarised as they are for Lacan: 'We exist, as the thinking things we are, only thanks to a baffling dance of brains, bodies, and cultural and technological scaffolding' (*Natural-Born* 11). Lacan's theory of the self alienated by the formation of the subject, relates to those parts of us that cannot be translated into language; but cognitive science has made evident that non-conscious processes are not alienated but functioning elements of our cognitive processes and subjectivity. This positive take on the extended nature of human cognition and subjectivity by EM

and cognitive scientists generally, demonstrates acceptance or celebration. Lacan's contestation of the Cartesian subject, with his more negative slant on human subjectivity as being pointed in a fictional direction and enslaved by the symbolic order, makes evident the dark side of the notion of the mind as extended into the world and the potential anxiety associated with human dependence on 'mind tools'.

Lacan's anxiety, accentuated by his realisation of the extent of our dependence on the medium of language, relates to a fear that has long beset the technology of the written and the spoken word. He cites the Biblical 'the letter killeth while the spirit giveth life', but 'how could the spirit live without the letter', in order to describe the paradox whereby our entry into the symbolic order of language, and so into the knowledge of good and evil, not only brings the epistemological subject into existence, but alienates it from its ontological self; it is the inaugurator of temporality and death ('Agency' 158). This reference from the Bible to the potential destructiveness of language is in itself evidence of the long lived concern with the way in which language, which has been so transformative of humanity, at the same time as stabilising and labelling something also divides it, limits it and is not the thing itself. As Lacan pessimistically puts it, the 'symbol manifests itself first of all as the murder of the thing' ('Function' 84). For Lacan, it remains a troubling exchange that he avows necessary: the presence of the word is the absence of the thing, which translates into presence as a human subject as the absence of being. It relates to a historical structure of epistemological concern about the creative and divisionary powers and lacks of language as a formed and formative tool, which is often reiterated in attitudes to other technologies. Thus, although Lacan shares an interest in the fundamentally formative nature of language, unlike EM Lacan explores the darker concerns about the intimate relationship between language and human subjectivity.

Butler's Bodies of Discourse

Judith Butler completes our psychoanalytical trajectory offering fertile reconfigurings of Freudian and Lacanian concepts, for she operates not at any dead end but at a crossroads, an interstice of psychoanalytical, poststructuralist and feminist domains. Butler's works also intersect interestingly with EM theories. What then for Butler do embodiment, embeddedness and extendedness involve and along what paths can extended mind ideas meet with her concepts? Bodies matter she asserts because of the way in which a disjunction between sex and gender has made sex a naturalised distinction: 'gender is a performance that produces the illusion of an

inner sex or essence or psychic gender core' ('Imitation' 728). In various works, including *Gender Trouble* and *Bodies That Matter*, Butler argues that sex, like gender, is in fact contingent and constructed. This might seem to be supported by Anne Fausto-Sterling's work which enlists scientific research to demonstrate that sex as a strictly demarcated binary is constructed, arguing that variations continue along a continuum rather than there existing any sudden disjunction; with approximately 1.7 percent of children born as intersex individuals (51-3). However, it would clearly be mistaken, to leap from sexual difference operating along a spectrum, to the amplification of the tiny region of intermediacy as the norm. In Butler's conflation of sex and gender as equally constructed concepts there is a lack of acknowledgement of the physical differences that exist along the larger part of this spectrum and of the biological factors associated with male or female sex, and which exist in addition to the sociocultural factors that pertain to masculine and feminine gender roles. Whilst Butler importantly makes visible the fact that ideas about sex, like ideas about gender, are affected by sociocultural ideas and therefore can be differently constructed, her rebuttal by exceeding the realm of the sociocultural, itself domineers over the realm of the natural and physical.

Butler persuasively describes language as not a 'mimetic mirror' of the body, but takes things too far, inverting the dichotomy by describing language as performative of the body (*Bodies* 29-32). According to Butler, the body does not appear outside of discursive processes that constitute it:

The body in the mirror does not represent a body that is, as it were, before the mirror: the mirror, even as it is instigated by that unrepresentable body 'before' the mirror, produces that body as its delirious effect... (*Bodies* 91)

Butler risks reinstating reason and the linguistic as privileged terms in an immaterial/material binary hierarchy. She has acknowledged her debt in this: 'I am not altogether out of the loop of the Enlightenment if I say, as I do, that reason's limit is the sign of our humanity' (*Giving* 83). Anne Fausto-Sterling is a little closer to a view consonant with EM, in her suggestion that 'we switch our vision (sort of putting on 3-D glasses), so that we see nature and nurture as an indivisible, dynamic system' (228). The image not only produces the body, the body also plays a vital role in producing the image. Similar issues are explored later in relation to early modern sexuality and humoral gender stereotypes.

Exposing the problematic extent to which social constructs can be naturalized, leads Butler to a re-analysis of the transhistorical structures posited by psychoanalysis. The symbolic, Butler argues, is not the quasi-permanent structure

that Freud and Lacan (and latterly Žižek) present it as being. In their reliance on an unproblematised heterosexual matrix they fail to realise that sex is a differently reiterable construct (*Bodies* 22). Butler contends that the body is an estrangement from the 'I' who claims it and is a phenomenon in the world, since it gains its sexed contours through identificatory and exteriorising processes; this is an idea to an extent compatible with EM, in terms of EM's notion of the plasticity of the body image, but not to the point of the elision of biological matter. Whilst she dismisses the notion of constructivism as a causal process or an act which occurs once with fixed effects, she then replaces it with the concept of a temporal process produced through a reiteration of norms:

What I would propose in place of these conceptions of construction is a return to the notion of matter, not as a site or surface but as *a process of materialization that stabilizes over time to produce the effect of the boundary, fixity and surface that we call matter.* (9)

This questioning of the stability and fixity of boundaries holds parallels with scientific research's discoveries to the extent that Butler depicts the body as having negotiable properties rather than being fixed. Yet she tends again to omit recognition of matter as a physical participant and implies that the material world itself is only produced through this process rather than being something that exists in itself; a flaw also to be found in Varela, Thompson and Rosch's theory of the world as apparently found not made that was discussed in Chapter 1.

Butler adopts Irigaray's description of the term *catachresis* (Gk.: misuse): catachrestic citation 'mimes mimesis' in that it refuses the concept of resemblance as copy (*Bodies* 45). This notion of catachresis is drawn on in Butler's theory of authority and the law, which exist as citational reiterations that through being critically mimed are potentially reinventable with each reiteration as well as predetermined (109). A similar line of argument is taken in her description of the performativity of identity: the performance of identity is shown to be a process that requires reiteration because it always fails to accomplish self-sameness. A reiteration is constrained because it must be recognizable, but simultaneously by demonstrating its lack of self-sameness the potential for intentional subversion and misuse is evident ('Imitation' 727). Thus Butler explains that constraints do not determine the subject: the necessity of reiteration in the performance of identity makes it 'open to variation and plasticity' (*Bodies* 89, 95). In fact, this plasticity in human beings is currently understood to be enabled in part by neurophysiological structures. As discussed in Chapter 1, the plasticity of body boundaries and neural structures

contribute to the human ability to incorporate and co-opt language, other subjects and technologies in this variable and plastic way. Indeed, a neurological parallel exists to Butler's theory, since the plasticity of brain networks, operating through the storage of information as superpositional traces, means that a neural trace is partly constrained but always new and reiterable. Thus, arguably our bodies and our constructs of them coevolve and shape one another rather than any one-way domination.

Butler also uses the logic of reiterability to demonstrate that identifications are multiple and contestatory, rather than fixed and with oppositely sexed parents, so that identity and desire need not be necessarily mutually exclusive, as it is portrayed by Freud and Lacan (99). Rather than fixed and predetermined relations and networks into which we enter, there is evident in Butler's thesis a dynamic that, as with the scientific theories explored in Chapter 1, allows for the evolution of change; although here the dynamic involves only signifying, and not biological, structures.

Despite the difference between their work, Butler provides a potential response to the demand that has been made of Clark, of how a subject who is 'tools all the way down' can be held accountable. This occurs in a defence of poststructuralism, against the assertion that an incoherent and ungrounded subject cannot provide a basis for personal or social responsibility. Butler powerfully suggests that it is the very incoherence of identity that makes connection with another possible, and that conversely, specificity of identity produces the loss and degradation of this connection: coherence is purchased only at the cost of foreclosing the complexity and crossing of identifications of which we are composed. She sees the demand that a multiply constituted subject provide one exclusive identification as a product of an imperialist 'all-consuming humanism' which enforces a reduction and paralysis of the subject whose plurality of identities are imbricated in one another (*Bodies* 16).

In *Giving an Account of Oneself*, Butler follows through on the ethical implications of this, by further explaining how our opacity and incoherency operate as the grounding of our social responsibility. Like Varela and his colleagues, she argues against a unified self and describes social responsibility as a consequence of our interrelationality. Butler defends poststructuralism against those who equate it with moral nihilism: ethical failure is not a consequence of poststructuralism's deconstruction of the unified subject. The alterity through which the subject is constituted and decentred does not imply an irresponsible or unresponsive subject but ethically connects us to other subjects: 'my own foreignness to myself is, paradoxically, the source of my ethical connection with others' ('Giving' 37) Conversely, the unforgiving judgement of ourselves and others that that demands

self-identity, mastery and unity, involves a constitutive violence by excluding our own and others opacity (35). A subject can be held to account simply by being prompted to address another, with any demand for narrative coherence, requiring a falsification of that subject's life, because of a preference for a 'seamlessness of the story' (34). Like de Sousa, Butler notes that this demand is ironic because of the automatically decentring action of the 'I', the transferable signifier with which the narrative is introduced: 'The "I" is the moment of failure in every narrative effort to give an account of oneself' (35, 37). Butler advocates a sceptical stance individually and universally:

Indeed to take responsibility for oneself is to avow the limits of any self-understanding and to establish the limit not only as a condition for the subject, but as the predicament of the human community itself. (37)

Conversely, the individualist moral narcissism that Butler critiques, by cutting off the subject from the world, destroys the basis for its moral engagement with it, by failing to understand that a precondition of our ethical responsiveness is the primacy and irreducibility of our relations to others (*Giving* 107-9). An extended view of the mind shares with Butler an awareness both of the fundamental significance of our multiple, plastic and opaque subjectivity and of the intimate involvement of other people in our cognitive processes, the latter of which is most persuasively presented in Kosslyn's account of Social Prosthetic Systems. Arguably, the discovery of the role that mirror neurons play in our human ability to empathise with others, in addition to Damasio's work uncovering the role of the ventromedial prefrontal cortex, also gives neurobiology an important role in understanding this human interrelationality which Butler sets out to validate.

To realise both the capacities and constraints involved in being human is very much a part of the recognition of how technologies allow us to offload our cognitive processes. Butler focuses upon the most important of these: language. In her analysis of the linguistic as both enabling and constraining, she shows not only the importance of acknowledging the extent to which we are socioculturally constructed but also that the boundaries of our constructs are variable and negotiable. Yet, whilst Butler provides a compelling argument that an opaque self is a responsible agent, she falls prey to reinstating a hierarchy of reason and the language over the body and non-conscious processes. Butler shows that our plasticity allows the reiterability of subjectivity, but does not consider the basis that exists for this in supporting neurophysiological evidence, as her argument remains focused on sociocultural and linguistic structures. It might be better argued that the social relationality of human

beings is enabled by a combination of coevolving neurophysiological and sociocultural factors. Where Butler argues that our multiplicity, mutability and opacity do not undermine but enable ethics, Damasio would further add our neurophysiological materiality. He argues that: 'The edifice of ethics does not collapse, morality is not threatened, and in a normal individual the will remains the will. What can change is our view of how biology has contributed to the origin of certain ethical principles arising in a social context' (*Descartes*' 24). Chapter 1 demonstrated that whilst EM remains wary of models which confer too much importance on the role of the brain or the body alone, it nevertheless incorporates enlightening evidence about the role of neurology and physiology in our cognitive processes. Butler, poststructuralism and social constructivism generally veto the role played by biology: but the body and brain that human beings are in matter as much as their sociocultural environment. It is together that they enable the very plasticity, multiplicity and relationality that make us human subjects.

Reappraising

The introductory sections to this chapter discussed how despite literary theory's increasing interdisciplinarity since the 1960s, though drawing on philosophical, historical and psychoanalytic theories, it has tended to keep its distance from recent scientific works and disciplines, due to the poststructural resistance to anything interpretable as positivist claims to 'facts', 'truth' or 'reality' (Jackson 321-3; Crane and Richardson 123, 129). Yet over the last decade or so a small number of literary theorists have posited the potential of cognitive science to provide a valuable contribution to the humanities and literary studies. These offer a variety of standpoints ranging from attempts to reground literary criticism through cognitive accounts (Mark Turner, Francis F. Steen, F. Elizabeth Hart); to the negotiation of grounds for inclusion of cognitive science as a supplement (Patrick Colm Hogan); to polemical attacks on literary studies' relativistic excesses with cognitive theories presented as the necessary antidote (Joseph Carroll and lapsed Lacanian, Dylan Evans). Yet these critics are less helpful to the consideration of EM and literary study than might have been expected. They have generally been heavily influenced by cognitive linguistics, embodied mind or evolutionary psychology models that tend to universalize human nature and this leads to the overuse of archetypal image and narrative schemas. Rather than the notion that human minds were molded into a fixed form in the Pleistocene era, which is the logic upon which some evolutionary literary models appear to operate, Clark (following the work of Kim Sterelny)

suggests that because humans have evolved capacities for the construction of cognitive niches, this in turn leads to our inhabiting 'a rapid succession of selective environments', which in turn favours 'the biological evolution of phenotypic plasticity' (*Supersizing* 66-67). As I have argued this standpoint offers instead more support for the view that postmodern social constructivist theories in fact have a neurophysiological and material basis that contributes to human co-opting of external structures, and therefore EM supports such theories at the same time as requiring that they be rethought.

Through charting some of the nuances of psychoanalytical and poststructural theories, in the discussion of Freud, Lacan and Butler, this chapter has explored the relationship between this body of theory and EM. But it is also useful to explore the particularities of an argument which has been raised against the possibility of these theories engaging with cognitive literary theory, and to consider how this argument would work in relation to EM. The cognitive literary theorist Mary Thomas Crane provides a general example of the type of argument made about the incompatibility of psychoanalytical and cognitive scientific concepts:

Both psychoanalytical and contemporary materialist approaches about the nature of subject formation differ from cognitive approaches in emphasising the fragmentation of the body and mind and in positing a more thoroughgoing and pervasive role for language and the symbolic in the process of forming a conscious and speaking human subject. (*Shakespeare's* 157)

In Crane's account of psychoanalytic approaches, she suggests that language plays a more encompassing role; yet Daniel Dennett himself has remarked on the similarities between his views and deconstructionist approaches. Upon reading David Lodge's novel *Nice Work*, Dennett comments, he was surprised to discover that his concept of 'the self' as a construct of narrative already existed in deconstructionist accounts of literary theory (*Consciousness* 410-11). Crane, like many cognitive literary critics, is greatly influenced by the embodied metaphors of Lakoff and Johnson and bases her conceptualisation of cognitive science predominantly on their works. The use of cognitivism as if it were a fixed singular entity seems particularly ironic because of the diversity of views being developed in the field of cognitive science which conflict with this universalising tendency. This diversity in cognitive approaches led to the conscious focusing in by this study on only one particular thread of thought within this field, theories relating to the EM, albeit in its most expansive form which draws on human embodiment, embeddedness and extendedness as significant factors included under its canopy.

The first point in Crane's quotation above argues that psychoanalytical and materialist theories' emphasis on the fragmentation of the body and the mind contrasts to cognitive science's unification of the mind and body. Elsewhere she elaborates on her view of the distance between the Lacanian lack at the centre of the subject, and cognitive theory's representation of 'a somatosensory "feeling" of self-presence as the centre of self-consciousness' (96). But the necessity to mark the incoherence of this feeling, acknowledged by the use of quotation marks, undermines the clear polarisation she attempts to make between these two fields. Cognitive scientific approaches influenced solely by embodied metaphors or evolutionary psychology may make this claim, yet an EM perspective provides cognitive and neuroscientific evidence of the fragmentation and multiplicity of the processes operating in the body, the brain, and the world. Crane's emphasis on embodiment as a container of presence again reflects the dominant influence on her of Lakoff and Johnson's work in cognitive linguistics (95-96, 161). Whereas EM's argument about the human self, suggests that along with the illusoriness of its fixity and coherence, it loops into the world as well as the body.

What makes us distinctively human is our capacity to continually restructure and rebuild our own mental circuitry, courtesy of an empowering web of culture, education, technology, and artefacts. Minds like ours are complex, messy, contested, permeable, and constantly up for grabs. (Clark, *Natural-Born* 10)

Unlike the cognitivist literary approach that Crane presents, EM is based on the cumulative uncovering of evidence that a human being is a physical, mental, technological, and social amalgam with negotiable and contestable boundaries. This is not incompatible with, although it holds repercussions for, psychoanalytical and cultural theorising. Psychoanalysis and cultural theories can in return offer interpretative and critical tools for unpacking some of the implications of the extended mind hypothesis. The fertile combination is a rich resource for literary study, and allows for a richer unpacking of ideas evident in early modern texts and the mirror-motifs in Shakespeare's works.

Nevertheless, a significant contribution of an EM perspective to literary theory is the notion that subjective experience need not always be shaped by theoretical concepts, and that these do not entirely predominate over human existence. Cees van Leeuwen comments that one-sided philosophers 'have admonished us that our experience is shaped by the concepts we are using to describe it'; there I think he also describes much of current literary theory's attitude. Against this view, and using evidence from neurological studies of visual perception, he argues that 'some

phenomena are likely to survive changes in our theoretical beliefs' (119-20). Ramachandran uses the concept of love to argue that the initial biological sparks that create the biochemical and neurological signals that contribute to our experience of love should not be viewed as contradicting or undermining the reality of it; they prove that the love is not faked ('Marco Polo'). In discussing love, Alun Anderson suggests that whilst there are basic neurophysiological reactions the experience only really gets complicated for us when the competing concepts we have about it preoccupy our minds; nevertheless there is a physical as well as a cultural basis (Pers. Comm. April 2006).

To borrow from Damasio's 2005 preface, his discovery in writing *Descartes' Error* was the connecting of 'the fabric of social and cultural phenomena to specific features of neurobiology'; and his hope was 'that a two-way bridge could be established between neurobiology and the humanities' (xix-xx). This thesis aims at building some of that bridge from the humanities' side by using evidence from cognitive science and neuroscience about the plasticity of the brain and body structures and about the diverse ways in which we are embodied, and embedded and extended. This should not be seen as a contradiction of social constructivist theories, but as a demonstration of what bio-mechanically enables humans to be socially constructed, and as an invitation to further thought and discussion about the implications of these theories for literary studies. Having argued for the relevance of EM to literary study, what I now hope to contribute, is to show the historical background to the debate by demonstrating an earlier awareness of ways in which our subjectivity is extended and multiple and mutable. The early modern concepts of the mind and subjectivity that the rest of this thesis will investigate, demonstrate diverse facets of a distributed subjectivity and both a celebration and concern about how the world of words, objects and people, make us a human subject.

EM invites an inclusive exploration of the collaborations that exist between the technological, sociocultural, biological and environmental resources that make up our minds and our selves, rather than limiting what makes us human to only one or two of these factors at the expense of the others. Yet psychoanalytical works still have much to offer. Freud's works as we have seen interconnect with neuroscientific interests and works that have influenced EM; Lacan's views interconnect with notions of human extendedness, but present the dark anxiety that can arise from this awareness. Butler reveals the reiterability of discursive modes that shape our understanding of being human and provides an important defence for the incoherence and multiplicity of human subjectivity as in fact the grounds of ethical responsibility.

Converse to the disbelief which generally greets the news of the extent of our extendedness, psychoanalytical and continental philosophical ideas commonly employed by literary theorists are already poised to interact with these ideas through their own history of exploring our sociocultural construction. Yet the problem is rather that social constructivist ideas have become so prevailing, that what has perhaps become more controversial is suggesting that there could also be a neurophysiological basis for human adaptability and that this allows for cultural and technological resources to have the dynamic effect they have upon us. Although I am equally wary of oversimplifying the diversity of work being done within literary theory, a general underlying trend is that the biological has become only viable to acknowledge and investigate in terms of it being a historical or sociocultural construct, as evident from the discussion of Butler's works. Perhaps underlying this is a vestigial fear that ethics cannot withstand the apparent threat of biological input as enmeshed in our moral and rational processing; sociocultural effects as alone responsible perhaps appear to more satisfyingly distinguish humans from other species.

Jean Howard, in an article upon the developing field of new historicism approvingly describes the (by no means unique) claim that it has shown that we have no essential humanness but that our humanness is created by history. This all or nothing approach to 'the nature or nurture question' is brought into question by cognitive and neuroscientific research which shows that the view of humans as constructed solely through history, is blinkered in its exclusive focus on the environment minus the organism. Similarly, both earlier and current universalist traditions, are mistaken in their focus on 'the universality of man' without due regard for the environment: that is, they both tell only part of the story. The evidence is that what is universal about our humanness is this very adaptability to our historical context. Our biological and cognitive processes coevolve with the technological and sociocultural environment in which we exist. Therefore, it is not an 'either' or 'or', but a Freudian 'and' that is called for. The irony turns out to be that this especial adaptability to being created by history constitutes our essential humanness. There is then a dynamic new universal: 'Plasticity and multiplicity are our true constants' (Clark, *Natural-Born* 8).

Early Modern Embodied and Ensouled Subjects

Man is clearly not of simple but of multiple, not of certain but of ambiguous (*ancipitis*) nature, and he is to be placed as a mean between mortal and immortal things. (Pomponazzi 282)

Early modern attempts to understand and explain human nature's propensity for extendedness, adaptability, and opacity were primarily portrayed in terms influenced by Christian world models. The humanist Pietro Pomponazzi captures in the statement above this era's awareness of the existence of these human traits, and its significant disjunction with modern views, in the general inclusion of metaphysical immortality in the early modern schema. In order to make more visible the parallels and disjunctions between early modern and current thinking about human extendedness and related issues, the following three chapters tease out key threads of the wider discourses circulating in Shakespearean England. These wove the intricate tapestry of views and beliefs in terms of which early modern subjects viewed themselves. Since neither a concept nor a period are homogenous, as well as considering representations that overtly demonstrate the embodied, embedded and extended nature of the early modern subject, this is balanced in the following chapters with examples that are closer ancestors to reason-centred and dualistic concepts of cognition and subjectivity; a one-sided emphasis on the former would re-enact in reverse, critical discourse that only perceives the latter, besides which, these are in certain instances intertwined. As in earlier chapters, as well as forms of extendedness that relate to the cognitive capacities, the more general understanding of the use of other people and things as an extension of the subject ('extended subjectivity') is explored, including forms that are a recursive means to self-knowledge ('extended reflexivity').

The confusions apparent in twentieth and twenty-first century philosophical debates on the meaning of the term 'mind', become further complicated in addressing early modern accounts, where such interlinking terms as brain, mind, spirit, and soul, are frequently exchanged one for another. For instance, Prospero in *The Tempest* mentions 'My old brain is troubled,' and then continues 'A turn or two I'll walk/ To still my beating mind' (4.1.159). Whilst crowded marginal commentary on the Bible (1590) glosses 'the spirite of a man' as the 'minde of man' (1 Cor. 2.11). Donne requires an entire sermon to describe the range of possible meanings of the word spirit: 'amongst the manifold acceptations of the word spirit...it is either the

soul it self, or the vitall spirits...or the superior faculties of the soul' (*Sermons* 5: 65). Focusing on the period contemporary with Shakespeare, these three chapters intend to clarify the terms used for discussing the early modern mind and subject and to trace the ways in which these terms involved embodiment, embeddedness and extendedness. It is proposed that the early modern human subject was understood as extended both in terms of its material properties, which shared in and linked it to the properties of all of sublunary creation, and as a manifestation of the wide-ranging 'soul', which linked man to God and to the souls of all levels of created life. These coeffective factors lead to descriptions of the human mind and subject's relationships and interactions with the world as porous, intimate and dynamic.

The early modern period is known for being both a melting pot and ablaze with a particularly diverse array of philosophical and theological ideas: scepticism, stoicism, and humanism combining with various forms of Catholicism and Protestantism. In addition major social, political and technological changes were occurring: urbanisation, secularisation, the enclosing of land, court life, wars and disease, colonisation, the printing press, and developing technologies, including, of course, optical technologies and a new profusion of mirrors. Katherine Rowe stresses that it is important to view any complex cultural structure as a 'historically composite phenomena, anchored in the biology and social practices of different periods' (178). Every period of time's interactions with the world, creates and is created by a multiplicity of continuities, transitions and contradictions of scripts, values and models, some of which the period itself appears conscious of, whilst of others no awareness is expressed. This observation results in part of my approach to the problem of interpreting early modern experience from a twenty-first century perspective, which can be usefully compared to that of the Dennettian heterophenomenologist discussed in Chapter 1. As *heterochronologists*, although we do not have immediate access to the first-person living experience of being early modern, there is leeway to doubt their reports, because the reporters are in fact only authoritative about what *seemed* to be happening. The early modern period's texts are an assemblage of multiple persons' practical and imaginative fictions given in the period's own terms, and can therefore be investigated for an explanation of why they exist, rather than remaining an insurmountable problem. Species-specific physical factors and traits towards hybridity and plasticity provide long term resonances across time and space, as well as ruptures between different historical and cultural settings, enabling meaningful connections, as well as distinctions, and a gradual accumulation of knowledge and perspectives.

Another aspect of my approach relates more generally to the perspective proposed in the opening chapters, that human experience and perceptions of embodiment involve the biological body, our particularly plastic brain, and the sociocultural beliefs, scientific knowledge and technologies of an era. Reapplying this perspective to a different era, the implication is that although the early modern body may have been a relatively similar biological form, the body that early modern thinkers conceive and experience is often portrayed quite differently from that of modern times. How does this work? A true story from Stephen Cowley (inspired by Ed Hutchins) which is on the nature of distributed cognition can be used to illustrate:

In identifying patterns in the stars or looking through a telescope, distributed cognition enables the crew of a ship or the rowers of a canoe to get to port. Each individual sets off physical events based on the beliefs and artefacts of a culture. Micronesian sailors, for example, picture themselves as using the stars and ocean to keep a canoe still while awaiting a floating island (sic). In spite of relying on fictions, the strategy works. The myths of Micronesia permit them to make landfall at their island destination. Physical features of the world are woven into old stories in ways that function pragmatically. (109-10)

A historical parallel to this is the employment of Ptolemaic geocentric astronomy in the early modern period, which continued to co-exist alongside new heliocentric models (Carroll 6). In *The Book of the Courtier* Castiglione describes this geocentric model: 'The bowl of heaven, adorned with so many celestial lamps, and the earth in the centre, surrounded by the elements and sustained by its own weight' (331). Cultural beliefs and philosophical interpretations map on to underlying physical features and processes in a way that functions practically within a society. Even when sustaining and being sustained by fictions, these beliefs are nevertheless based on and coevolve with the geological characteristics of the world or, as in our main topic in this chapter, the biological characteristics of humans.

Awareness of the human tendency to create elegant fictions, as well as an understanding of the mind as extended, is shared by theories in the early modern era. In *The New Organon* Francis Bacon set out the methodology for his unfinished plan for a great renewal of learning that was intended to overcome the four 'idols', 'the illusions' which 'block men's minds', these are: general human nature; one's own individual nature; the common understanding, and philosophical theories (40). Bacon's damning description of the last as 'idols of the theatre' uses the variety of different accounts of the heavens as evidence of the human tendency to create narratives that satisfy our own understanding:

For just as several accounts of the heavens can be fashioned from the *phenomena* of the air, so, and much more, various dogmas can be based and constructed upon the phenomena of philosophy. And the stories of this kind of theatre have something else in common with the dramatist's theatre, that narratives made up for the stage are neater and more elegant than true stories from history, and are the sort of thing people prefer. (50)

The types of stories created, reveal the pattern making and human-relating tendency of the human mind (42). Bacon argues that rather than relying on authorities and traditions, which reflect the human tendency to create elegant patterns and leap to abstraction, that there should instead be a more incremental and empirical testing for the '*Interpretation of Nature*' (30); a methodology partially adopted by the Royal Society in 1660. These stories can also be seen as tending to narrow the flux of existence to an anthropocentric middle-scope, especially when newly confronted by a range of realities spanning the microscopic to telescopic. What is required, Bacon contends, is that we appreciate that tools and assistance are needed by the mind as well as the body: 'Neither the bare hand nor the unaided intellect has much power; the work is done by tools and assistance, and the intellect needs them as much as the hand' (33). As in the extended mind hypothesis a human being is portrayed by Bacon as necessarily comprised of physical, mental, technological, and sociocultural factors.

In fact the range of new types of early modern technological and scientific tools which could assist and extend the mind's abilities is not the main focus in this thesis. An account of the intimate relation of Renaissance culture to the rise of the machine was recently covered by Jonathan Sawday in *Engines of the Imagination*. In this thesis, following instead the focus of Shakespeare's works, the focus is on the body, the environment, language, and other people as extensions of the mind or the subject: these are most telling of the *fundamental* nature of human extendedness. However, in the later chapters these are examined in relation to one particularly influential developing technology, the mirror, and the discussion also briefly involves the impact of the printing press on concepts of the mind and subject. The utilisation of new tools is simply an extension of what Shakespeare demonstrates as the fundamental hybridity of human nature, which is creative of our adaptability and of our conceptual abilities and limitations.

To sum up, whilst the early modern period shared an awareness of human embodiment, embeddedness and extendedness this is expressed in accordance with contemporary belief systems. Human extension was understood as occurring not only through the body and material world, as in current EM theories, but also through the mind's ability to extend via intellectual flights, which were generally believed to be

human's most god-like quality. Since the early modern period is only authoritative about what seems to be happening to those experiencing it, the heterochronologist is free to re-examine the evidence, and surmise differently. The early modern period also shared an awareness and growing scepticism over the tendency of humans to frame experience according to individual and common human qualities and beliefs and to accept elegant fictions and abstractions as truths.

These three chapters explore manifold early modern practical and imaginative texts, including religious sermons, pro- and anti-theatrical pamphlets, medical, Christian and hard-word dictionaries, character writings, jest books, advice literature, and other historical, philosophical, rhetorical and literary works; in order to develop a picture of how these ideas resemble or differ from current notions of embodiment, embeddedness and extendedness, and to explore the world from which Shakespeare's works emerged. In this chapter the focus is on early modern depictions of the physical and spiritual elements which participated in the cognitive capacities and in constructions of subjectivity, as well as how these connected humans into a system comprising the wider world and beyond. Chapter 4 tackles attitudes to forms of language and memory, in order to examine the porousness of boundaries between the mind, the subject, and his mnemonic and linguistic tools. Chapter 5 explores the social nature of subjectivity, related current theories about early modern subjectivity and early modern concerns about first-person versus third-person access to our own and others' cognitive experiences. The chapter concludes with a discussion of early modern mirrors, preparing the way for the final two chapters' demonstration of the ways Shakespeare's use of the mirror-motif acts as a fertile focus for tracing contemporary notions of embodiment, embeddedness and extendedness.

Appraising the Early Modern Mind and Body

The underlying project of aligning the properties of the human brain with its cultural artefacts as addressed to its own uniquely adaptive traits promises to be the greatest and most urgent challenge confronting the next generation of critics. It will be met only by a great deal of trial and error and very hard analytical thinking, shucking as it goes those analogies and causal assumptions that do not meet both a rigorous definition of mind and a rigorous employment of cultural history. (Beecher 1479)

In literary studies recognition is gradually developing of the potential significance of cognitive science and neuroscience. This section gives a brief overview of several types of relevant work being done on the early modern mind and body that relates to the themes and timespan considered by this thesis. Further pertinent works will be discussed in the course of the thesis, since perhaps what is most exciting about the

extended mind approach is that its rubric draws together a multiplicity of approaches, including works on subjectivity, material culture and the history of the book.

Bacon's insistence on the human mind's need of tools and supplementation, confirm that extended mind (EM) thinking is not unknown in the early modern period. Yet pioneering thinkers pursuing these parallels are as yet few. Two such thinkers are John Sutton and Evelyn Tribble, who have reapplied aspects of EM to early modern thinking, the former focusing on memory and the latter on memory, performance and worship; their work is discussed in Chapter 4 in relation to early modern memory systems. Like Tribble, Ellen Spolsky explores the transition from Catholic to Protestant means of worship, suggesting that iconoclasm resulted in an epistemic 'cognitive hunger' (a term borrowed from Clark) which the spread of literacy failed to fill; yet the claim that this is then responded to by the drama of Shakespeare fails to make a convincing case, as Beecher has commented, partly due to the difference of scales involved between the widespread iconoclastic reforms and the more limited reach of the Shakespearean drama (x; Beecher 1477-79).

A few books have emerged that compare general discoveries from cognitive or neuroscience with Shakespeare's works. Philip Davis recently published *Shakespeare Thinking* which makes some fascinating observations about Shakespeare's ability to capture the sense of cognition in motion and about his use of 'functional shift' (the use of one part of speech as another, such as the noun turned verb 'godded'), which Davis has shown causes a heightened neural response (93). Yet Davis abstracts his findings towards questionable conclusions, claiming that it is not a character who speaks in Shakespeare but a life-force and that Shakespeare's 'codes' key 'into the fundamental life-structures of the brain' (9, 95). Previously, the neurologist Paul Matthews collaborated with literary researcher Jeffrey McQuain in *The Bard on the Brain*, a book that attempts to relate cognitive phenomena uncovered through imaging techniques to famous passages from Shakespeare. Unfortunately, the strained connections made and the lack of any reference to early modern cognitive theories, as C. Butler argues, result in a work that serves rather as a warning of the pitfalls of interdisciplinary collaborations between the sciences and arts (1085). Arthur F. Kinney does provide a rich background of cognitive history in *Shakespeare and Cognition*, but this is only tangentially linked to a small number of current neuroscientific works.

Meanwhile, both Mary Crane's *Shakespeare's Brain*, which compared recent work in cognitive science to readings of Shakespeare by literary and cultural theory, and the 2004 *International Shakespeare Yearbook*, with a section of six essays on cognitive science, implicitly conflate a specific interest in

cognitive linguistics with the whole field of cognitive science. Although this limitation is acknowledged in Graham Bradshaw's preface, in the same breath this gap is muffled, covered over by the implication in the second half of the sentence that it is only the findings about metaphor that are particularly worthy of study by Shakespearean literary researchers:

Cognitive science has many mansions and quite a few battlefields which are not visible in this volume; in the rest of this preface I want to recall some reasons why Shakespearians should be interested in cognitive accounts of metaphor. (x)

Nevertheless, these works are at least a movement towards a fuller acknowledgement of cognitive science's manifold facets and their potential implications for literary studies.

There has also been recent interest in the early modern mind and subjectivity that does not draw on modern cognitive science. As a historical overview, Paul S. MacDonald recently provided a two volume account of *The History of the Mind*, which traces the many senses of the words 'mind' and 'soul' from Homer to Hume, spending a chapter on the medieval and early modern usages (*History* 1: 245-78). However the ambitious scope seems to have led to a reliance on secondary sources, dictionary definitions and unreferenced quotations, which leads to the too simple dichotomy being offered that the mind was primarily associated with the animus, reason or intellect, and the soul with the anima, or life force (255). Critical interest has also focused on the relation between the early modern mind and body in relation to debates concerning Descartes' philosophy. However, along with work done on mid-seventeenth century puritan debates, these postdate the time period considered by this thesis, which concentrates primarily on ideas circulating during Shakespeare's lifetime, the main literary focus.

Literary studies of the early modern mind are considerably less numerous than those which focus on the body, although there are also a number of related sociological and cultural studies of the period. An area of critical interest in the mind is the topic of madness, on which Michel Foucault's *Madness and Civilization* has had lasting influence even amongst its critics. Foucault describes the Renaissance and Middle Ages as periods in which the mad person was still part of society, prior to the 'Great Confinement' that involved the debasement and incarceration of the mad, and which occurred from the mid-seventeenth century onwards (35-36). Klaus Doerner in *Madmen and the Bourgeoisie* relates this systemic confinement of the mad to the rise of the bourgeoisie, but Roy Porter in *Madness* demonstrates that no such generalised systemic confinement took place at this time (14-17; 93). Michael

MacDonald's *Mystical Bedlam*, provides a nuanced account of the relation of madness to the wider culture and of the variety of terms in use for madness, basing his discussion primarily on the notebooks of the seventeenth century physician Dr. Richard Napier. Yet, like Foucault he argues that there was no real change in understandings of madness until 1660 (3). Whereas Carol Thomas Neely's *Distracted Subjects*, which focuses on accounts of madness during the Renaissance, suggests that types of madness were predominantly conceived of as temporary states, and that there were changes in the understanding of notions of madness, especially in terms of their increasing secularization (6).

Another related area of critical interest focuses on evidence that there were complex associations between certain forms of melancholy and madness. For instance, Michael Screech has shown that Platonic notions of mania as ecstatic (that inspired mystical theology and biblical writings) had become intertwined with Aristotle's claim that all geniuses were melancholy, so that melancholy had become understood as a cause of mania (25-35). Yet the conflation of Elizabethan melancholy with madness by Vieda Skultans, who in her history of *English Madness* argues they are 'synonymous', is not borne out by early modern evidence (18) As Neely has also argued, although they were clearly related and overlap, no straightforward exchange of the two terms is possible (4). This is confirmed by *The Anatomy of Melancholy*, gradually revised by Robert Burton over the two decades from 1621. Burton refers to Montaltus' statement that "'Fear and sorrow" make it [melancholy] differ from madness' and then goes on to approve that 'Fear and sorrow are the true characters and inseparable companions of most melancholy' (1.1.3.2).¹ It is not surprising then that historical accounts of melancholy have also been considered in relation to modern depression, most recently in Jennifer Radden's *Moody Minds Distempered*. Whilst debates on the nature of madness and melancholy remain peripheral to the primary focus of this thesis, there will be some discussion of early modern discourses on melancholy in this chapter and further in Chapter 7 in the discussion of *Hamlet*.

As with modern cognitive theory, and concepts of the mind, studies of the body demonstrate a range of responses and theories about what comprises it, which is reflected by what is included in its study. As regards the body, historian Caroline Walker Bynum complains, that it has become 'no topic or, perhaps almost all topics' (2). Similar to philosophers of the mind, Bynum protests that authors from various disciplines speak 'with great assurance of what "the body" is and yet display little

¹ Burton's book has been referenced according to his own system: partition, section, member and subsection.

awareness of each others' conversations – conversations in which totally diverse assumptions and definitions figure' (3). This is apparent even just within literary criticism on the early modern period by the number of works evidently operating according to different beliefs about the nature of the body, yet discussion in works on the early modern body also echoes some of the general concerns raised in Chapter 2.

Influential recent works on early modern notions of embodiment include Thomas Laqueur's *Making Sex* and the essays edited by David Hillman and Carla Mazzio in *The Body in Parts* which both explore the involvement of sociocultural discourses in early modern conceptions of body parts. Martin Kemp and Marina Wallace's *Spectacular Bodies*, a publication based on an art exhibition at the Hayward Gallery on the history of human anatomy, considers the entwined relation of anatomical, artistic, philosophical and theological concepts of the early modern body. This is a topic that was explored in more detail by Jonathan Sawday's *The Body Emblazoned*, which considers the relation of concepts of 'anatomization' to wider cultural and literary discourses, and in particular to the contemporary fascination with 'particularization' that made the Renaissance a 'culture of dissection' (2). Thus, recent critical works have explored sociocultural discourses effect on concepts of the body and have brought into play medical and anatomical treatises as aids to understanding early modern concepts of the body and the subject. This thesis similarly calls on medical and psychological works from the early modern period in tackling the question of the contemporary understanding of the body's role in matters of cognition and subjectivity.

A work that has influenced this thesis and that ignited wider interest in the relation of the humoural body to the emotions in early modern accounts is *The Early Modern Passions*, co-edited by Gail Kern Paster, Katherine Rowe and Mary Floyd-Wilson. In the introduction they propose to describe the ways in which 'critical questions we ask about emotion' are 'scripted by normative attitudes' (13) Mary Floyd-Wilson with Garrett A. Sullivan have since expanded the scope of this theme, recently editing a volume on *Embodiment and Environment in Early Modern England*, which explores emerging views on the relation of early modern bodies to their environmental context. The various authors represent this relation as involving a distributed network of coeffective factors, a system of correspondences and analogies, a system of exchange, or a system of counteraction (4-6). The focus in this thesis lies primarily upon notions of distribution, yet arguably these are all persisting paradigms, as is the additional notion of a system of lack and rupture, now associated with psychoanalytical accounts. These paradigms are arguably a reflection of our

pattern making brain (as are binary and spectrum models) with part of the difficulty being to keep opposing models and paradigms in mind simultaneously.

New historicism's 'belief in the social constructedness of everything', Bruce Smith contends, led to the replacement in literary criticism of studies of 'the universal humanist subject' by studies of 'the *early modern* body' (20-21). The focus in such criticism by implication is to disregard the body itself in favour of pursuing the sociohistorical constructions of it. The ability of the physical body to become transparent in this way, I think suggests that like other tools-in-use the body need not itself become a point of focus (provided it works) because of its natural tendency to act as an invisible extension of the mind and subject; thus socioconstructivist notions are in fact enabled by this propensity of the human mind to allow subject and mind tools to vanish from conscious view. Yet, Catherine Gallagher along with the central proponent of new historicism, Stephen Greenblatt, do acknowledge the function of the body in *Practising New Historicism*, albeit only as 'a kind of "spoiler", always baffling or exceeding the ways in which it is represented' (15); thus echoing psychoanalytical accounts, rather than an EM view of the body as an ongoing participant in cognitive processes.

A description of 'the *corporeal* turn' in early modern studies by Keir Elam, which includes references to the works of Paster and Sawday, similarly connects recent critical concern with embodiment to the idea of a 'pre-semantic *bodiliness*' that is replaced, reduced and constructed latterly through language; this links Elam's understanding of critical debate on the body to the psychoanalytical and postmodern theories discussed in Chapter 2 (142). Bodiliness both in current cognitive science and in various early modern theories plays a more dynamic and ongoing role, and is not reducible to only a '*priority* of the somatic over the semantic' as Elam describes it (142). A comparison here that helps to unpack the overall problem with this approach is the research by David McNeill on gesture. As discussed in Chapter 1, McNeill argues that gesture is an ongoing player in human communication rather than just an initial evolutionary or developmental step that then allows language to develop. Bodiliness does not just act as a pre-semantic form of being but infuses being a human subject and interacting with other human subjects. Conceptual hypotheses are not only formed in relation to their own histories, but also in relation to the structures of the body, mind and world. In fact, rather than Elam's restrictive analysis, Gail Kern Paster brings the real physical leakiness of early modern women's bodies into play in her account of *The Body Embarrassed*, whilst Jonathan Sawday argues that "embodiment" as much as "selfhood" may itself be subject to history, which is as much a product of culture as it might be of nature' ('Self' 48).

Replacing the 'might' with an 'is' is sufficient to capture the view put forward in this thesis.

Dympna Callaghan argues that literary criticism's recent interest in the body 'as viscera' is in danger of a 'reification' of 'the brute facticity of matter' that is not in the interest of 'our political commitment to literature' (68-71). Callaghan's statement in fact reflects the much more wide-ranging dislike in literary criticism of acknowledging that things, such as the body and the world, have an independent existence. For instance, Callaghan objects to 'the profoundly erroneous belief that matter has a life of its own' (69). To attempt to deny that matter has a life of its own, I think holds more danger of making literary criticism untenable by placing it not so much on shaky as non-existent ground, than it offers a suitable means of defending its importance.

Similar objections to recent critical interest in embodiment are raised by Carla Mazzio in 'Two Responses to "Shakespeare and Embodiment"'. Mazzio suggests that this era is undergoing the culmination of a long process of re-enchantment with materiality, a trend she associates with the marginalisation of literary studies in institutions and the domination of science as the locus for truth claims (Strier and Mazzio 18). This objection could aptly be extended to the realm of technology and technological disciplines given the important role they play in institutions and in our lives. In fact, the way our bodies, technologies and the world works, are a source of fascination and anxiety in every age, and whilst critical discourses increasingly take notice of biological and technological contributions to human subjectivity in this period of scientific and technological advances, this is not necessarily negative. Besides, as we have seen, influential thinkers from the neurosciences, such as Ramachandran and Damasio, are returning this interest, by turning to the humanities for more understanding of the emerging complexities of the human subject.

Richard Strier's viewpoint in this co-produced discourse is likewise negative about interest in early modern scientific texts:

I see no reason to think that the history of medicine or of theories of physiology gets one closer to the experience of the persons in the past than the history of ideas does. I am inclined, in fact, to think that it gets one less close to the experience of persons, though closer to one sphere of discourse. (Strier and Mazzio 17)

To reverse Strier's argument, an understanding of the history of ideas which does not include knowledge of contemporary physiological and scientific beliefs, which do not just exist as theories, but are actively operative in people's understandings of experiences, shrinks critical view of their experience, culture and literary

representations. Besides, it is not just a question of trying to understand more fully early modern perceptions, but also of understanding how both recent and historical beliefs illuminate each other and contribute to our understanding of the shifting and persisting patterns creative of and produced by human nature. Thus critical theories, like the discourses they reflect on, develop in relation to the individuals and environments in which they exist and replicate, and therefore as much wariness is necessary in approaching modern critical norms, as in approaching early modern ones.

Outwardness and Inwardness

Burckhardt's much rehearsed nineteenth century claim for Renaissance individualism was that a more self-conscious and objective view of one's subjectivity was achieved, with Dante's exquisite *Vita Nuova* held up as marking the boundary between the Middle Ages and modern times because: 'Here subjective feeling has a full objective truth and greatness...Here the human spirit took a mighty step toward the consciousness of its own secret life' (229). Since then, new historicist critics, such as Jean Howard, have accused such claims of being anachronistic projections, asserting that it was not until the eighteenth century that 'interiority and self-presence' began (15). Whilst Burckhardt's particular description does suggest a product of an age closer to his own, in its faith in the reliability of introspection, the 'interiority and self-presence' described by Howard can be traced to much earlier periods. Katherine Eisaman Maus warns about the homogenisation of a cultural concept, such as subjectivity, which operates in different periods:

'Subjectivity' is often treated casually as a unified or coherent concept when in fact it is a loose and varied collection of assumptions, intuitions and practices that do not all logically entail one another and need not appear together at the same cultural moment. (29)

Therefore the concept of subjectivity does not necessarily entail an autonomous, executive or unified self. In the early modern period the relationships between inwardness and outwardness and the nature of the human subject were variously celebrated, acknowledged and fretted over.

Interiority and self-consciousness are neither anachronistic conceptions, nor were they something entirely new in the early modern period; they were linked into a religious tradition that was aware of, and was concerned with explaining, the secret life of the mind and the enigma of oneself. The limitedness of human self-knowledge

involved the notion of man as a decentred and synecdochal subject, because he was both a creation and extension of God. St Augustine was a seminal influence on the concept of the inability of the mind to encompass itself: 'If the mind is not to be fathomed even by itself that is because it is the image of God' (qtd. in Gilson 215). Montaigne in his analysis of human reason, quotes a later Doctor of the Church: "'I know by myself," says Saint Bernard, "how incomprehensible God is, since I cannot understand the parts of my own being"' ('Apology' 493). Robert Burton describes the paradox that although we understand all things through the soul, we cannot understand it itself (1.1.2.5). The emphasis in many medieval and early modern texts upon a lack of self-knowledge, which arises from our divine but fallen nature, portrays a vertical reflexivity, which is only clearly achieved when the blessed attain paradise, and as Dante renders it, like mirrors shine back God's light at him (*Divine* canto 29, lines 142-5). Within the medieval culture that both preceded and continued to participate in early modern ideas, the subject was often figured as desiring of a self-knowledge that was endlessly deferred and only achieved beyond the temporal world, because of the composite nature of man.

Jonathan Dollimore insightfully remarks that even current theories about decentring, especially evident in psychoanalytical and postmodern accounts of the subject, are not subversions but continuations, dating back to the Christian Fall narrative, in which 'transgressive desire haunted by death' brought the subject into being (*Death* 91). Dollimore explains the crisis of subjectivity as an originaive force which has animated rather than undermined Western European civilization:

...individualism was from the beginning energized by an inner dynamic of loss, conflict, doubt, absence and lack which feeds into our culture's obsession with control, its sense that the identity of everything, from self to nation is under centrifugal and potentially disintegrative pressures which have to be rigorously controlled. ('Death' 254)

Thus, the anxiety, alienation and sense of lack manifest in the accounts discussed in Chapter 2, are traceable back to Christian narratives of subjectivity, marking different contextual expressions of a permanent theme. Yet whilst this is a revealing connection, it is important not to simply conflate psychoanalytical and postmodern with early modern accounts.

Throughout the Renaissance a prevalent model for self-understanding continued to be the church-backed Thomistic account of the human soul (Michael, 'Renaissance' 168). This presented self-knowledge as achieved firstly, within the self and secondly without it. The concept of the importance of self-knowledge since

‘the higher the nature, the more interior the act of generation’ was combined with the paradox that the human mind in this life ‘can only understand itself when brought to act by species [immaterial forms] abstracted from things sensed’ (*Summa* 139; *Aquinas* 218). Reflexivity in the medieval period related primarily to knowledge of God and was directed ultimately to the next life; whilst, in the early modern period the ever-increasing emphasis on the practical and moral utility of reflexivity within this world allowed secular and empirical concerns an increased predominance. This was accompanied by an escalating anxiety about the reliability of the human senses and mind, and the problematics for this life of first-person self-knowledge, and that offered by another person or tool.

Concepts of self-knowledge describing the body’s role variously emphasized notions of a constraining and fragile bodily container and as providing a means of epistemological access. Accounts of the body’s role were influenced by the pervasive Platonic notion of universal forms imprinted in human minds, understanding of which is filtered through sensory impressions (*Phaedrus* 249b-c). Francis Bacon in *The Advancement of Learning* flatters James VI thus:

... your Maiestie were the best instance to make a man of *Platoes* opinion, that all knowledge is but remembrance, and that the minde of man by nature knoweth all things, and hath but her owne natiue and originall notions (which by the strangenesse and darkenesse of this Tabernacle of the bodie are sequestered) againe reuiued and restored. (3)

Also evident here are biblical influences: ‘Tabernacle’, literally a tent, is a term used for a portable temple or church, for Christ’s body, for the dwelling of God, and for the human body (Coote; Wilson, *Christian*). This suggests the sanctity of the body, as well as its enclosing and transitory nature. The ‘strangenesse and darkenesse’ of the material body and of the human mind whilst it remains within that body are emphasized, in contrast with the potentially enlightened mind. Yet, even here the notions of the mind and body are not clearly polarized because of their interdependence in this life.

Entitled with the Socratic injunction ‘Know Thyself’, Sir John Davies’ didactic poem *Nosce Teipsum* (1599), examines contemporary debates on the popular theme of self-knowledge in verse form. Davies presents man’s mind as capable of independent self-reflection, but argues that since the Fall the vision in ‘the waterie glasse’ of his mind is damaged, which instils self-hatred and can lead man to rely instead on his error-choked senses (5). The interdependence of mind (or soul) and matter is less fraught in Helkiah Crooke’s *Mikrokosmographia* (1615), in which ‘the

image of the diuine nature' is described as 'most liuely imprinted in his soule and in his body, and in the substance & qualities of them both' (2). The body's significance for Crooke comprises the human as scientific and religious object and as living knowing subject. Crooke describes the fallen soul as a table, that is now only faintly inscribed with '*The Lawe of Nature*'; it is no longer capable of moving from universal to particular notions, but is dependent on the 'induction of particulars', so through 'hauing gotten knowledge from without himselfe' man arrives at merely approximate notions of universals (36). Crooke's highlighting of the vital role of gathering knowledge from the material world is not surprising since he was the royal physician, and he wrote the encyclopaedic *Mikrokosmographia*, a masterful account of the human body, as a defence of the need for interest to be taken in anatomy, not only for medical, but also for theological, philosophical and self-knowledge (12).

What is indirectly evident in all these accounts is that a fine balance was necessary in accounts of the body's role, since one extreme appears to question God's wisdom in placing man's soul in corruptible earthly material, whilst the other extreme places in question the immortality of the soul without its material body given its reliance on it. The careful steering necessary between these heretical Scylla and Charybdis, is apparent in Crooke's swerving between presenting the body as a constraining prison and as performer of the soul's diverse faculties:

For the Soule, albe it when shee is free from the prison of the Bodye can see without an Eye, heare without an Eare and by her owne simple act discourse without the help of spirits; yet so long as she is immured within these wals of clay shee cannot contemplate the speculations of Externall things without an Externall medium; and therefore Nature (by which I vnderstand the wisdom of the eternall Creator) framed the body of many Organicall parts whereby and wherein the Soule might exercise her Diuine administrations, produce and exhibit the powers and efficacies of her manifold Faculties. (428)

As earlier in his book where he directly tackles the question of why God made man from sublunary elementary matter, Crooke suggests that it is necessary for there to be an affinity between the sensory medium and the external world; hence physiological structures involved in human cognitive processes have been created in relation to the world's structures (6). Another concept that had become an early modern commonplace, which derived from Neoplatonism, is implicit in the above quote and is also stated explicitly earlier in the text: 'the Soule of man *Is wholly in the whole, and wholly in euery particular part*' (4). Early modern man's soul was imagined to be: 'incorporeall and diffusiue, quickning, sustaining, gouerning and moouing the whole body, and euery part thereof, euen as God supporteth and ruleth the whole

world, being by a diffusiue nature, or rather infinite omni-presence, at all times, in euery place' (2). Thus the soul is analogous to the diffusion of God's presence in the world. The topos also appears in Davies' versification of contemporary debates on the nature of the soul: 'Some say, *she is all in all, and all in part:* Some say, she is not containd, but all contains' (11). This topos, which Davies later confirms, is of the soul as the multiply distributed and expressed force behind human existence and cognition; not as 'a pilot in his Ship' but 'all in part diffus'd' (39).

It is evident that whilst models of subjectivity and cognition are relative to the periods in which they operate, with metaphysical notions mediating conceptions of human embodiment and extendedness in early modern models, there are nevertheless a number of similarities with current distributed cognitive models. The early modern body was understood as a mode of access to, as well as a limiter of, human knowledge and knowledge was gathered from a world with which the subject shared physical properties, properties that were made in relation to and out of the world. Whilst in these accounts the sensory information seems to operate just as input that is then rationally processed, rather than as part of cognition, the following sections make apparent that both body and world were generally understood to dynamically participate in human cognitive processes. Also noteworthy is that the soul is portrayed as distributed within the body, rather than as head bound. In addition, psychoanalytical and postmodern models in metamorphosed forms continue earlier Christian concern over the synecdochal and decentred nature of man.

The Immortal Soul

Despite recent discoveries much uncertainty over the nature of the mind remains, especially in areas where the study of the mind has absorbed into it questions once directed towards the soul, such as the mystery of consciousness and qualia. These can be connected to philosophical debates concerning the immortality of the soul that were sparked by the Lateran Council of 1513, when Pope Leo X proclaimed that some people 'have even had the audacity to assert that the soul dies along with the body and that the opposite view is based on faith alone', and so he 'expressly enjoined Christian philosophers to refute their arguments and use all their powers to establish the truth' (Descartes, *Philosophical* 2: 4). The radical decision to allow philosophers to produce arguments to defend belief in the immortality of the soul newly opened up Church doctrine and theology to infiltration by other forms of knowledge. Michael and Michael explain that the church was influenced in this decision both by Ficino's arguments for the soul's immortality, and by the revival of

interest in Averroist Aristotelianism and the Greek commentators, Alexander of Aphrodisias and Thémistius, who questioned Aristotle's commitment to the personal immortality of the soul (31-32).

Yet, Pietro Pomponazzi's *On the Immortality of the Soul* (1516), written three years after the Lateran Council, controversially argues that 'no natural reasons can be brought forth proving that the soul is immortal' (377). He adds in his *Apologia* that the soul is material because it is dependent on the body, and mortal because it is extended and divisible (Randall 276; Michael and Michael 37-38). The soul as mortal he claims does not undermine but is a greater argument for virtue ('On the Immortality' 375). Pomponazzi argues that since no mental act occurs without the body, the intellect must cease along with the vegetative and sensitive soul: the human soul is a form 'beginning and ceasing with the body' as the intellect 'knows always with matter, since it knows with phantasms, with succession, with time, with discursiveness, with obscurity' (321-22). On a scale of degrees the human soul is 'the highest and most perfect of the material forms' (321); hence the idea of a 'double truth' was necessary, to split religious faith from rational truth. This debate concerning the soul is a foreshadowing of current philosophical debates concerning qualia, such as de Sousa's insistence that subjective experience is not transcendent, as discussed in Chapter 1. Pomponazzi's theory implied that the religious version of the immaterial intellectual soul would be too passive and impersonal, or that there may be no independent immaterial soul and hence no immortality after all; Pomponazzi's ambivalent dying words were that he would go 'where all mortals go' (Copenhaver and Schmitt 110). Thus, whilst Pomponazzi employs the hierarchical scale from matter to the non-material, his theory demonstrates an influential early modern rationale for belief in a materially based intellectual soul. Then, as now, there are major thinkers who question the possibility or desirability of the personal soul's or qualia's independence from materiality, even with the danger of accusations of heresy around in the sixteenth century to perpetuate the dogma of individual transcendent immortality.

The apparent threats of lack of individuality and of biological input as enmeshed in our moral and rational processing became understood as endangering religious claims concerning man as an image of God with a personal immortal soul. This was diversely responded to in theories which proposed both that humans and their cognitive processes could rationally only be understood as corporeal worldly creations, and conversely later by Descartes' theories which in the defence of personal immortality of the soul attempted to depict the human mind as incorporeal and to drastically distinguish humans from other species (Descartes, *Philosophical 2*:

4). These concerns about the mind (and soul), once based on Christian doctrine, have metamorphosed into discussions about neurobiology, qualia and social constructivism in this more secular age.

Soul: The Three Degrees

Christians and Westerners who still believe in 'a soul', generally conceive of it as unitary, yet using a schema that dates back to Aristotle via Aquinas (Lewis 161), early modern discourses commonly represent the soul as consisting of three faculties: 'intellectual, sensitive, and vegetative' (Crooke 2). Robert Burton comments on wider contemporary debates, such as Piccolomini and Zabarella's discussions on whether the soul consisted of three distinct souls or one soul with three faculties, and Campanella's adoption of the Paracelsian belief in four souls, before he concludes like Crooke that: 'The common division of the soul is into three principal faculties – vegetal, sensitive, and rational, which make three distinct kinds of living creatures: vegetal plants, sensible beasts, rational men' (1.1.2.5). The three levels on which the soul operated and how they actively participated in human cognitive processes and subjectivity is considered in this section, through considering in detail Coeffeteau's model of the three faculties.

In the preface to *A Table of Human Passions*, published in translation in 1621, the French bishop Nicolas Coeffeteau provides an elegant account of mainstream contemporary ideas about the soul. He explains that the soul is the form of all living things, with the more noble forms containing the perfection of the lesser, therefore:

It followes that there beeing three degrees of *Soules*; that is to say, that which *giues life*, which is the lesse perfect; that which *giues sense*; which is the second ranke, and the *Reasonable* which is the noblest of all; this *Reasonable soule* which is peculiar onely to *Man*, contains all the powers and perfections of the other, and can effect as much as all the rest together. By reason whereof man hath a *Vegetative soule*, which is common with plants; he hath the *sensitive*, which he hath common with bruite heasts; But he alone is in possession of the *Reasonable soule*, whereby he hath nothing common with the rest of the Creatures. (sigs. A8v-A9r)

Typically, on the bottom rung of this ontological and epistemological ladder, the vegetative soul is a material life-giving and digestive force within plants, animals, and man. One step up, is the sensitive soul shared by man with animals, relating to the faculties of feeling and sense. Lastly, the rational soul of the intellect is what distinguishes man from the rest of creation, due to the ability of the mind to reflect upon itself; as Donne describes it: 'The difference between the Reason of man, and

the Instinct of the beast is this, That the beast does but know, but the man knows that he knows' (*Sermons* 8: 225). Yet, Baldesar Castiglione in *The Book of the Courtier*, which first appeared in English translation in 1561, tends to the idealistic in his description of the various epistemological levels, as he excludes mention of a vegetative soul, severing a connection and hiking humans up a step to share in the penultimate rung of the angels:

Now in the human soul there are three faculties by which we understand or perceive things...the senses desire things through sensual appetite or the kind of appetite which we share with the animals; reason desires things through rational choice, which is, strictly speaking, proper to man; and intellect, which links man to the angels, desires things through pure will. (325)

Notably, as is often the case, Castiglione's portrayal of the perceptual and understanding faculties and of the corresponding appetitive faculties of each of the three levels is of interdependent forces.

In spite of their variations, these models all view the soul as essentially multiple. This has interesting parallels with current cognitive theories. One recent parallel to this model of the tripartite soul is Dennett's taxonomy of intentional stances, discussed in Chapter 1, in which creatures are placed on an ontological and epistemological ladder according to the perceived extent of their intellectual and evolutionary development. In addition, Dennett's paradigm shares in the idea that the higher stances encompass the abilities of the lower and that humans are special on account of their ability to think about their own thinking. Moreover it shares with several of the early modern models the emphasis on moving towards knowledge via the external world, as according to Dennett, humans use inner models informed by constructs in their outer environment (*Kind of Minds*, 112-34). The paradigm of an ontological and epistemological ladder has itself evolved.

Another conventional early modern conceptualization of the workings of the soul, which accompanied the tripartite paradigm, is of the operations within the subject as structurally analogous to the monarchical body politic or commonwealth. This hierarchical theory appears an antecedent to the illusion of a reason-led executive subjectivity, as described by the cognitive scientific accounts in Chapter 1. The human body and mind are presented as microcosm of the kingdom's hierarchical model, and of the megacosmic structure of God, a model which serves to validate monarchy, as natural and divine. This sleight of hand is a trick that would be recognised by Derrida or Butler, in which the model of the original (the body) is created from the cultural copy (the realm) and is situated as prior to that which it then

serves to validate by naturalising the copy. In fact the closer one looks at early modern versions of this allegorical kingdom model, the less it upholds any sense of man as a contained, centralized or straightforwardly hierarchical entity.

As evidence of this and as a more thorough depiction of the roles of the three faculties of the soul, it is worth considering Coeffeteau's model in more detail. It begins by describing the vegetative soul, which immediately overturns the top-down model by calling the natural appetite 'the *Queene* of all the rest'; the other appetites refer all their actions to her command in accordance with natural law, and her basic powers are guided not by the '*Indiuidue*' but by 'vniuersall *Nature*' (sigs. A9v, A10r-A10v). Next, the sensitive soul is described as a faculty that knows, desires and moves (sig. A11v). It has two sorts of '*Knowing powers*': the exterior and the interior (sigs. A12r-a2r). The exterior five senses gather information through their affinity to matter, transmitting the qualities to the common sense, which compares and judges them, and presents them as either healthful or harmful to the imagination. The image of things are then engraved into the imagination so that knowledge of them may remain after they have vanished away (sig. a1v). The information is also presented to the memory, which although primarily a 'Store-house and Treasury' yet 'for that she doth continually represent vnto the *Common sence* the formes which are consigned vnto her, she may well bee sayd also to helpe to *Knowledge*' (sigs. a1v-a2r). Memory is understood as an active participant in cognition; as is also evident in medieval and current neuroscientific models, a parallel recently noted by Mary Carruthers and neurobiologist Yudin Dudai (Carruthers and Dudai 567).

The sensitive soul also has two primary appetitive powers, the irascible (angry) and concupiscible (desiring) passions; these move via the sinews, muscles and ligaments, are 'dispersed ouer all the members of the *Creature*', and serve as an instrument 'to that part of the blood which for the great subtility and purenes thereof hath gotten the name of Spirit' (sigs. a2v-a3v); thus, spirit in early modern models is the material blood and air distributed throughout the body, and the emotive powers are likewise dispersed by it. Last of all, the reasonable soul has two powers, understanding, which receives forms from the imagination so abstracted as to be universal, and the will, or intellectual appetite, which is also named '*Queene*' but which is blind and dependent on other agencies for information and guidance (sigs. a3v-a6v).

A potential traitor to the will in the subject's microcosmic realm is a conventional culprit in antique guise, the '*Sensitive Appetite*', temperamental ruler over the passions:

Queene of the powers of the soule she ordaines what they shall imbrace, & what they shal fly as it pleseth her whereunto the *Sensitiue Appetite* yeelding a prompt obedience to execute her command from the which it neuer straies, so long as it contains it selfe within the bounds and order prescrib'd by Nature (sig. a6v)

Coeffeteau points out that man not only does not have command over the agents of the vegetative soul, guided by natural law, nor does he necessarily have it over those of the sensitive soul, our animal instincts, other than by a resolution of his will (sigs. a4v-a5r). Instead 'oftentimes hee ouerthrows and peruerts this order, either by bad education, or by *custome*, or the *organs* being vnsound, or for that his *will* hath bad inclination' (sig. a7r). This dynamic is also evident in the versions of this allegorical model in Pierre Charron's *Of Wisdome* (c.1606) and Thomas Wright's *The Passions of the Mind in General* (1601) (71-74; 95-96). Indeed, Wright suggests that rather than any straightforward opposition between reason and the passions that 'reason, once being entered into league with passions and sense, becometh a better friend to sensuality than the passions were before' (96).

Therefore, even though this early modern allegorical model initially seems oppositional and centralised, there is a complex division of the self into a mass of internal agents, who operate through a coalition of quasi-independent animal and natural processes, and on which reason is dependent. In addition, these agents do not share unified purposes, connections with, or perspectives on the world since they operate on different levels of an epistemological and ontological hierarchy. The assumption of a centralised controller with which the kingdom model appears to begin is resisted by the recognition of the multiplicity and dispersed nature of the mind, and in Coeffeteau's version by nature as well as humans' blind will being figured as queen. A conflation of the rational soul with the mind is problematised by this early modern model, which resists such a reductive construction of its distributed cognitive processes. The human subject appears threatened, as well as aided, by the quasi-autonomous agencies of the vegetative and sensitive souls; as humans are infiltrated by and dependent on the natural and animal instincts. As in psychoanalytical models, humans are presented as fissured creatures in their very being and knowing. Yet, the next section explores how this distributed human nature could be positively viewed as connecting humans to the world and the stars.

Humoural Humans

Flowing through the vessels of every living organism the humours linked together early modern minds, bodies and world. The humours, etymologically and literally

fluids, engendered species, and national and individual natures, as well as producing transitory behavioural or emotional inclinations. They were part of a holistic system that encompassed all of sublunary creation. From their Western origins in ancient Greece they travelled down via Galen and Islamic medicine, and continued to influence medical and philosophical theories throughout the Middle Ages and into the seventeenth century; a historical journey capably followed by Noga Arikha in her recent book *Passions and Tempers*. Their origins are also traced by Richard Gregory in *Mind in Science* who describes how Empedocles movement from single substance accounts of the world to a theory of the 4 elements of earth, air, fire and water in 5 BC, was soon after followed by Hippocrates notion of the 4 humours of the body and Aristotle's notion of 4 properties comprising the elements (28-33).

According to humoral theory blood, yellow and black bile, and phlegm make up an organism, and their properties relate to the four elements of which the world is composed: 'Choler [yellow bile] in temper the most hot and raging, resembles fire. Blood hot and moist, resembles the ayre. Flegme cold & moist, resembles the water. Melancholy [black bile], cold and dry, is fitly compared vnto earth' (Crooke 7). Arikha gives a table of the way each humoral category corresponds to character types, organs, seasons, times of day and life, a tutelary planet, a set of astrological signs, musical modes, colours and tastes (11), which whilst only suggestive of the complete system of correspondences, is sufficient to indicate how it worked:

Humour:	blood	yellow bile	black bile	phlegm
Character:	sanguine	choleric	melancholic	phlegmatic
Organ:	heart	spleen	liver	brain
Property:	hot & wet	hot & dry	cold & dry	cold & wet
Element:	air	fire	earth	water
Season:	spring	summer	autumn	winter
Time of day:	morning	midday	afternoon	evening
Time of life:	childhood	youth	maturity	old age
Tutelary planet:	Jupiter	Mars	Saturn	Moon
Astrological sign:	Gemini	Virgo	Scorpio	Pisces
	Taurus	Leo	Saggitarius	Aquarius
	Aries	Cancer	Libra	Capricorn
Musical Mode:	Lydian	Phrygian	Mixolydian	Dorian
Colour:	red	yellow	black	white
Taste:	sweet	bitter	sour	salty

Thus the elements, properties and humours operate as an organising principle for knowing the world, one's self, and their integrated nature.

In Shakespeare's time 'humour' referred to various processes, including those now commonly classed as 'mental' or 'physical'; the word demonstrates an epistemological flexibility, which reflects early modern belief in ontological fluidity. A humour is an underlying mental and physical disposition: 'The black oppressing humour' of melancholy, which causes sadness and heaviness of mind, is accompanied by symptomatic diseases that are treatable with allopathic cures (*LLL* 1.1.233; Bullokar 'Melancholy', 'Hemorrhodes'). A humour is a temporary state of mind or a mood: 'See what humour he is in' (*Wiv.* 2.3.79). A humour is a passing inclination: 'let it be as humours and conceits shall govern' (*MV* 3.5.69). The over generous potential of the word to signify, thus verging on meaninglessness, is comically played on by Nim in Shakespeare's *Merry Wives* who applies the word ubiquitously, and as malleably as it makes humans: 'I thank thee for that humour'; 'I will run no base humour. Here take the humour-letter' (1.3.53, 1.3.67-8). This flexibility, so that a single word could describe a variety of mechanisms, is also reflected by the current need for and production of new terms and of fluid lexical constructions: such as neuroethics, psychophysiology, cognitive artifacts, biotechnology and geminoid. Recognition of cognitive embodiment, embeddedness and extendedness is implicitly and explicitly operative in the way that language was and is developed.

Along with a number of scholars, Paster suggests that our interpretations of humoral descriptions have sometimes erred towards thinking figurative what was meant as literal and Laqueur insists 'the metaphorical and the corporeal are so bound up with one another, that the difference between the two is really one of emphasis rather than kind' (*Humoring* 11-2; 109). Similarly, Maus describes it as difficult to know when the habits of mind reflected in a bodily analogy intend an analogical or a literal statement of fact (196). In creative descriptions of what something is 'like', historian Laura Gowing argues, 'like' seems to imply a stronger relation than it does now for us (21). Another historian, Ulinka Rublack, provides a specific instance, concerning the now figural phrase 'hard hearted': it was believed that witches could not cry because their hearts had hardened, and they were thus incapable of being emotion-ally moved (7). The major opposition to Galenic humoral theories came from Paracelsus, but as Michael Schoenfeldt points out even 'he retains a significant amount of Galenic theory in his elaborate theories of correspondence and influence' (*Bodies* 3).

Robert Burton provides a contemporary definition of a humour as 'a liquid or fluent part of the body', which 'is either innate or born with us, or adventitious and acquisite' (1.1.2.1). In Ben Jonson's social satire *Every Man out of his Humour* the character Asper lectures that a humour is 'a quality of aire or water' with the properties of 'moisture, and fluxure', so that it is something 'wanting power to containe it selfe' (Ind. 89, 91, 97). Thus the substances of which humans were composed were understood to be fluid, dispersive and unruly. The humours unceasing motion and incontinency is again remarked on in Asper's explanation of the operation of humours in humans:

So, in euery humane body
The choller, melancholy, flegme and bloud,
By reason that they flow continually
In some one part, and are not continent,
Receiue the name of humours. (Ind. 98-102).

Asper then describes how these formative substances in humans have power over the subject's general disposition through the domination of a particular humour:

As when some one peculiar quality
Doth so possesse a man that it doth draw
All his affects, his spirits, and his powers,
In their confluents, all to runne one way,
This may be truly said to be a *Humour*. (Ind. 105-109)

The domination of a particular humour could have positive or negative consequences, depending on the degree and the attendant circumstances. Bacon, who closely observed the inclinations of his own humours, describes the equivocal aspects of the choleric character type: '*Ambition* is like *Choler*; Which is an Humour, that maketh Men Actiue, Earnest, Full of Alacriticie, and Stirring, if it be not stopped. But if it be stopped, and cannot have his Way, it becometh Adust, and thereby Maligne and Venomous' ('Of Ambition,' *Essays* 154). Depending on the internal balance, the environmental and sociocultural conditions, and the attitude taken, perceptions and experiences of humours could vary widely: the phlegmatic could vary between easy compliancy or passive lethargy; the melancholic between studiousness, gloominess or frenzy; and the sanguine between warm-hearted or lustful. The ideal 'complexion' is an equilibrium of the humours, and although normally one humour predominates, significant imbalances result in mental and physical illnesses. The various combinations of humours simultaneously construct and constrict the moral, mental and physical character of a subject.

A subject's humours were easily affected by changes such as bodily temperature (from which the term 'temperament' derives), food and drink imbibed, and the surrounding environment. In terms of diet, importance was placed not only on types of food, but also on quality, quantities and preparation. Cooking was perceived as a cultural and alchemical process relating to the wider social body, whilst the purification of food and expelling of waste by the body were conversely figured as occurring in a metaphorical kitchen (Lee 250-52; Crooke 13; Spenser 2.9.28-32). In Thomas Tomkis' play *Lingua* Appetite boasts cooking is a 'most desired and honorable art', but eating itself retained an ambiguous status, with John Davies of Hereford in the margins of 'Humours Heauen on Earth' scorning that 'Taste' is 'the sense wherein Men-beasts do most delight' (sig. D1v; 6). Schoenfeldt describes early modern self-fashioning as emerging through attempts to control bodily ingestion and excretion, whilst Maus suggests anxiety was caused by an ideal of the body as an intact sanctuary, which women's and men's bodies violation by ingestion and discharge makes 'a form of masquerade' ('Fables' 243; 194). This ideal is reflected in the fact that 'Sobrietie' included not only temperance in alcoholic but also gastronomic intake (Rogers sig. B8r), and is due to the fact that lack of moderation affected not only the body, but also the soul: 'We ought to be carefull to liue soberly, since the temperance or intemperance of the body extendeth to the helpe or maintenance, or to the hurt or trouble of the Soule' (Nixon 54). Diet was one of the means the early modern subject could employ in attempts to control the flow between itself and the world and to thereby shape its subjectivity, yet as Maus implies the flow itself undermined the sense of borders between subject and world.

Robert Burton links diets to humoral temperaments which are created by their particular national environments (1.2.2.3). This emphasis possibly derives from the translation of Lemnius' *Touchstone of the Complexions* in 1576, which stressed the relation of the characters of individuals and nations to their temperaments and complexions. Raphael Holinshed in the first volume of his compendious historical chronicle on the *Description and Historie of England* links the particular dietary requirements of the English to the geographical environment's effect on their temperament (165). This belief was dramatically represented at the time, as Bullough comments: 'The presentation of national types was popular on the stage in the late nineties...It accompanies the growing interest in "humours" which he [Shakespeare] shared and which is embodied in Nym' (2:11). Mary Floyd-Wilson coined the term 'geohumoralism' to describe the way in which ethnic dispositions were thought to relate to the physical and environmental disposition of the homeland, although the disposition was also fluid and impressionable by travel and civilising effects

(‘English Mettle’ 133). For this reason Burton advises ‘a transmigration of nations’ every six hundred years ‘to amend and purify their blood, as we alter seed upon our land’ (1.2.1.6). Thus environment, as well as diet, fundamentally shapes the subject.

Moreover, Montaigne beautifully describes humans as coevolving in relation to the geographical landscape and meteorological airs around us:

We feel palpably by experience that the form of our being depends on the air, climate and the soil where we are born – not only the complexion, the stature, the constitution and countenance, but also the faculties of the soul (‘Apology’ 526).

As in the extended mind theory ‘geohumoralism’ implies that there are no fixed boundaries between the outer realms and inner functions in the early modern humoral subject. Montaigne makes apparent this affects every aspect of the human being: the perceptual and cognitive faculties of the soul operate in relation to their embeddedness in the surrounding environment as well as to their embodiment in the individual subject. Crooke describes bodies as: ‘*Transpirable* and *Trans-fluxible*’ (175): the world and the subject are breathed and flow in and out of one another. This transpirability and transfluxibility produces inconsistencies and imbalances in humans: ‘That man whom you thought so adventurous yesterday, do not think it strange to find him just as cowardly today: either anger, or necessity, or company, or wine, or the sound of a trumpet, had put his heart in his belly’ (Montaigne, ‘Of the Inconsistency’ 293). This leads to issues concerning agency and lack of autonomy of the human subject which are discussed in later chapters.

One particularly noted humoral imbalance was melancholy, with references to it suddenly proliferating after the 1580s. As Vieda Skultans argues this is due to its appeal in an age of increased education and thwarted ambition, with melancholy the prevailing mood amongst writers suffering deficient sources of patronage; it may also have been an elite fashion brought back from Italy by aristocratic travellers (19-22). The view that the world was nearing its end and that it was an especially dissolute age (see for example Davies of Hereford’s ‘Triumph of Death’), combined with shifting standards and the uprooting of long-held beliefs also provided a conducive backdrop, leading to Robert Burton’s claim of a global epidemic: ‘all of the world is melancholy’ (‘Democritus,’ *Anatomy* 120). The layers of complexity involved in humoral theories generally are made evident by Burton’s anatomisation of the multiple potential causes of melancholy. The first causes were God and supernatural powers for which the only cure was prayer (1.2.1.1-3). Next the universal natural causes, the heavens, planets and stars, whose influences could be resisted (1.2.1.4). Then the congenital or inward particular natural causes, such as are

inherited or occur through the drying and cooling of the spirits with age (1.2.1.5-6). Lastly the outward and adventitious natural causes, 'the six non-naturals', which Burton describes as 'the principal causes of this disease': diet, retention and evacuation, air, exercise, sleeping and waking, and perturbations of the mind (1.2.2.1). Burton explains that both the humours of the body and the passions and perturbations of the mind were a cause of melancholy because:

as the body works upon the mind by his bad humours, troubling the spirits, sending gross fumes into the brain, and so...disturbing the soul, and all the faculties of it...so, on the other side, the mind most effectually works upon the body, producing by his passions and perturbations miraculous alterations, as melancholy, despair, cruel diseases and sometimes even death itself (1.2.3.1)

Thus the passions and the humours operated on each other reciprocally and reproductively. The *Anatomy* suggests that the system of humours involves all aspects of the human being and creation; like EM it is an inclusive system which acknowledges the widespread and reciprocal participation of multiple factors in making up a human being.

Like all humours melancholy could take diverse forms, the first chapter of Timothy Bright's *A Treatise of Melancholie* (1586) is entitled 'How diverslie the word melancholie is taken' and the length of Burton's encyclopaedic and self-analytical volume suggests its particularly protean nature (1). The rich mix of shared consistencies and particular divergences between melancholic types and individuals is coolly captured by the dry wit of Jaques in Shakespeare's *As You Like It*:

I have neither the scholar's melancholy, which is emulation, nor the musician's, which is fantastical, nor the courtier's, which is proud, nor the soldier's, which is ambitious, nor the lawyer's, which is politic, nor the lady's, which is nice, nor the lover's, which is all these; but it is a melancholy of mine own, compounded of many simples, extracted from many objects, and, indeed, the sundry contemplation of my travels, which, by often rumination, wraps me in a most humorous sadness. (4.1.10-18)

Jaques claims for himself a melancholy which is uniquely composed from his surroundings and his contemplation of previous experiences, which in turn fashions, informs and envelops his current experience and subjectivity, mediating his self-knowledge and his knowledge of the world. Like any humour, albeit more frequently than the others, melancholy could be mentally and physically unbalancing. For whilst it was normal for a humour to predominate in individuals, 'by becoming excessive, overly heated, or dangerously viscous, these humoral fluids brought about disorder and even madness' (Radden 5). The fashionable interest in melancholy demonstrates

especially clearly an early modern understanding of the manifold causes of human attributes and conditions, and the role of humours in cognitive and bodily processes.

Humoural theories also participated in early modern views of sex. In *Making Sex* Thomas Laqueur depicts this period as having a one-sex Galenic anatomical model, in which a woman's genitalia are the internalised version of the man's (8, 81-85). This seems to be confirmed by Crooke who describes how the locational difference of the genitalia was understood to be caused by the coldness of women: 'heat abounding in men thrusts them forth of the body, whereas in women they remaine within, because their dull and sluggish heate is not sufficient to thrust them out' (Crooke 202). Gail Kern Paster contends that the more significant sexual disparity is the thermal differential that is indirectly indicated by the anatomical variation, as this implied fundamental limits on the emotional range and individuality of women due to the correlation made between temperatures and emotions (*Humoring* 118). In fact, Crooke advanced beyond Laqueur's and Paster's models, as he rebuts the Galenic structural analogies, which 'many men do esteeme very absurd', although he still retains the thermal differential (271). In fact, although the Galenic one-sex model was reiterated by 'almost every medical writer of the sixteenth and seventeenth century' and provided a 'framework for medical discoveries, anatomical teaching and popular medicine', Laura Gowing notes that it 'was never the only way of understanding the body', as this remained an open topic of debate and metaphorical play in popular culture (18-20). Fissell makes a similar argument from her research on childbearing guides: 'Discussions of female bodies were important sites for re-imagining and re-negotiating not just the bodies themselves but the social and cultural worlds in which bodies were constituted' (433).

The jest book *England's Merry Jester* plays on fear of 'the slippery world' we live in, with recurring themes of women letting open their sexual 'door' or urinary 'flood-gate' inappropriately (60, 61, 92-93). Both Gowing and Paster detect a fear of women's penetrability and permeability, as relating to women's menstruation, vaginal discharges, waters breaking, breast feeding and urinary incontinence, the latter often caused by primitive obstetrical techniques (22; *Body* 45). Still, there is a biological variation, underlying the misogynistic sociocultural constructs that accounts in part for this belief. These weak and leaky vessels, at once shameful and sexual, were therefore portrayed as in need of control by men. Yet, in fact, this portrayal of women was fuelled and tempered by the fact that men were also perceived as made up by the flow and discharge of fluids: 'all early modern bodies were leaky: the humours flowing around the body, determined health and temperament, and men were far from immune to concerns about bodily fluids

leaking' (Gowing 22). Bacon describes the fluidity and pliability of 'mens watry and soft natures' (*Advancement* 107). Thus, now as then, human nature's fluidity and permeability can be creative of anxiety, although in the early modern period it is understood in terms of humourality with concerns projected onto women as a means of displacement.

Thus, humoral theories realised that the mind not only moved the body, but that the body also moved the mind. Whilst belief in the humoral system has eroded, Arikha argues for the humours continuing usefulness into the twenty-first century: 'Humours, and their contemporary equivalents, act as a bridge between the theories we devise and the mental functions that enable us to devise these theories – but without filling in the gap' (304). This is a similar standpoint to my own view as to the continuity of our reliance on explanatory structures that are approximate, but nevertheless participate in the nature of the world and the subject. Arikha also briefly suggests that:

If, as Damasio and others like Edelman have established, the body is represented in the brain and particularly in the somatosensory cortex, then it is quite plausible to read bodily types in mental terms – and vice versa – as the humoralists did (288-89).

Whilst in agreement with Arikha's sentiments here, Damasio's contribution does not so much concern the establishment of the representation of the body in the brain (which was established much earlier); his work argues for the fundamental role of the body state and emotions in reasoning and our humanity. This topic is discussed in the following section, along with the body states' and passions' relation to the spirits and to attitudes to mutability.

Passions, Spirits and Mutable Matter

The dynamic intermingling of the humours with the passions entwined the brain and body's processes linking matter to morals. Like Burton, Francis Bacon describes the humours and other operations of the body affecting the mind and the passions and the mind affecting the body (*Advancement* 94-95). Bacon gives examples of the effect that imagination has upon the body and vice versa of the effect that fasting has upon the mind in order to demonstrate how the humours respond to the passions and how in turn the passions respond to the effects of humours (95). Bacon's account acknowledges both the coeffective nature of the body and mind and he concludes that therefore attempts to understand either of them must engage with both (95).

The passions, as mentioned earlier, are antecedents of modern emotions, and although understood to operate by different mechanisms, they were still understood in relation to embodiment, reason, and being human. The term 'passions,' was one of several terms circulating: 'perturbations' tended to be associated with troublesome emotions, whilst 'affections' were often specifically associated with love and liking. Books on the passions were popular during this period, often moving between physiological and moral issues, with particular emphases reflecting whether they were authored by physicians or theologians. Rolf Soellner and William Newbold discover two main models of the passions circulating around the turn of the sixteenth century. The most frequent model was of four primary passions; although the names vary, the essential scheme is: grief (present negative), fear (future negative), pleasure (present positive) and hope (future positive) (Soellner 552, 559; Newbold 38). This is derived from Ciceronian and Stoic models, in which emotions that are 'disturbances of the mind' are violently contrary to nature and reason. The other model, especially prevalent in Catholic accounts, is based on Aquinas' model in his *Summa Theologia* of eleven species of passions, six in the concupiscible and five in the irascible appetite (Soellner 550; Newbold 38-39). Aquinas was influenced by the more positive Aristotelian model of right circumstantial emotional balance. There were also commonly held to be 'a swarme of others, which...take their beginning, and spring from these' (Coeffeteau 36). In both types of account the intent is the pursuit of virtue and the oft repeated catch phrase is 'Nosce Teipsum': know thyself.

A central topic of debate was the role of rational control versus the expression of one's desires. Greenblatt's opinion that in the early modern period the self was understood to be 'most visible, most expressive, perhaps most interesting at moments in which the moral will has ceded place to the desires' is opposed by Schoenfeldt's contrary opinion that it is rather through the 'control and monitoring of a self always in flux' that it is defined (*Learning* 136; *Bodies* 17; see also Hampton 275). These critical controversies arguably reflect the divergent early modern opinions circulating during this period. Conflict between reason and the passions was allegorically conceived of in terms of civil and religious strife, which were perceived as macrocosmic reflections of the workings of man: 'in regard of the vice, disorder, and iniustice that is in these passions, we may compare man to a Commonweale' (Charron 71). In his chivalric epic *The Faerie Queene*, first published between 1590 and 1609, Spenser figuratively describes passion as a 'stubborne steede' in need of restraint (4.6.33); a description comparable with Freud's depiction of the ego and the id as rider and horse: 'Thus in relation to the id it is like a man on horseback, who has to hold in check the superior strength of the horse' ('Ego' 636). The irascible and

concupiscible passions are personified as Pyrochles (Gk.: 'one of fiery disposition') and Cymochles (Gk.: 'one who fluctuates'), the Saracen sons of Acrates (Gk.: 'without control') (2.4.41). In this schema victory over the passions is a feat allegorically compared with a Christian victory over Islam and anagogically with Christ's victory over death (2.8.53). Another traditional motif that retained popularity was Logos (reason) as steering Psyche's ship through a turbulent sea blown by the tempestuous winds of the passions (Davies of Hereford, 'Humours' 28; Lemnius 2-3).

Gowland comments that the increased humanist preoccupation with the passions and melancholy served 'as outlets for anxieties' shaped or provoked by social, political and religious conflicts (119). Turmoil in the world was understood in relation to turmoil in man and therefore addressing the original source in man with simple oppositional binaries of reason and the passions was a means to achieve a sense of control over actions and fates in turbulent times. On similar territory Paster argues that the perceived threat of the passions results in the 'quest for the self-sameness and manly constancy prized by humanists' (22). This quest foreshadows more recent attempts to disregard human neurophysiology or to promote perceptions of humans as autonomous subjects.

In fact, the unruly passions ability to act as a threat is due to the fact that reason, like the body on which it relies, was seen as 'stretchable, pliable, and adaptable to all biases and all measures' (Montaigne 'Apology' 516). The mind and reason are not reliably stable reflective mediums against which embodied experience can be measured, but implicated and entangled in it. Laura Gowing describes the early modern interrelation of body and mind:

The body's boundaries were imagined differently. Mental and physical subjectivity were entwined and emotional experiences made themselves manifest through the body. The flows of the body...were interwoven with those of the emotions...(2)

Similarly Rublack insists that 'subjectivity was profoundly experienced as interrelated with the physical' (13). This is exemplified in Coeffeteau's description of the passions as a parallel to the sinews: 'Passions are in the soule, as the sinnewes in the body; for as by meanes of sinnewes we extend [o]r bend the members so by the operations of Passions, wee carry our selues to good or euill' (75). Moreover, the soul, the body and the world are fundamentally interconnected: 'the soul may be shaped into all other varieties of forms and molds to itself the feelings of the body and all other accidents. (Montaigne 'That the Taste' 46). Soul, mind, and body were understood as analogous and implicated in one another.

Early modern belief that embodied and interactive flows of humours and passions shape cognition and subjectivity shares with Damasio an understanding that body states and the emotions are linked into the cognitive processes of the subject. A claim made by Damasio, regarding the inextricably human nature of experiencing emotions, was also a common early modern emphasis, as those without passion are described as either a stone or God (Burton 1.2.3.1; Coeffeteau 51-76). A crisis of subjectivity can be caused not only by a human subject's unruly agencies but also by a lack of human feeling. While the early modern emphasis is often on passions tendency to disrupt reason and enchain it in sensual and worldly ends, conversely in Damasio's account it guides reason towards long term goods, and to social and moral virtues. Yet, early modern perceptions sometimes shared in such positive views. Montaigne asserts that 'the finest actions of the soul proceed from and need that impulsion of the passions' ('Apology' 518). Passions were also associated with Christ and the Judaeo-Christian tradition of strong emotion (Nixon 71). Besides, popular books on the passions, equivalents of modern self-help psychology books, rely on the audience's belief that learning about their passions will teach them about human nature and so lead them to virtue. This belief in the positive role of the passions has implications for literature. Early modern rhetorical models' commonplace of the Ciceronian affective triad 'teach', 'please', 'move' is dependent on the ability of the passions to move the listener or reader to virtue; Wright's fifth book on the means to move passions, therefore includes several chapters focused on rhetoric. Brian Vickers recently described how 'poets and dramatists had to appeal to their audience's emotions and were duly evaluated as having done so adequately or not' (16). In fact, Damasio mentions Shakespeare's insights into the human mind, and this section demonstrates the intellectual background from which these emerged (*Descartes* 129-31; *Feeling* 38-9, 287-9).

Bacon advises investigation of 'the Seates, and Domiciles which the seuerrall faculties of the minde, doe take and occupate in the Organs of the Bodie' (*Advancement* 95). Following Plato he places understanding in the brain, animosity in the heart and concupiscence in the liver; thus, he clearly identifies these cognitive and emotive powers as the distributed agents of the mind dispersed within the body (96). The passions were also transported around the body by the spirits, as mentioned earlier, and the spirits linked body to soul (Burton 1.1.2.2). Spirits weave together the material and immaterial since their substance is the most soul-like of materials as well as her conveyor: 'A subtle and thinne body alwayes moouable, engendred of blood and vapour, and the vehicle or carriage of the Faculties of the soule' (Crooke 174; see also Donne, 'The Ecstasy' 61-64). Crooke offers a vivid analogy for the

relationship of the invisible spirits to the body: 'they are like the winde which whiskes about in euery corner and turns the heauy saile of a Wind-mill' (824). Again reflecting the lexical flexibility of terms 'spirit' was used to refer to vital life energy, 'The expense of spirit' ('Sonnet 79' 1); intellectual power, 'some shallow spirit of judgement' (*IH6* 2.4.16); sensory perception, 'The eye itself/ That most pure spirit of sense' (*Tro.* 1.1.60); and the soul, 'Heaven give your spirits comfort' (*MM* 4.2.73).

The natural spirits providing nourishment rise from blood in the liver, are refined into the vital spirits of the heart, which provide heat, and upon entering the brain they are further refined into the animal spirits, which are then retransmitted to the body by the nerves which are 'Membranes wherein the Braine itself is inuested' (Crooke 824). Thus the basic forces of heat and digestion are linked into and composed from similar substances to those which perform cognitive processes and the brain extends its domain into the body via the nervous system. Yet, the spirits, passions, and humours did not necessarily use specific channels to traverse the body, since as Crooke explains 'in a mans body there are many secret and vnknowne waies' (252). Nor were they confined to the body. Air, one of the six non-naturals was operative on the openness of the body, and especially so on the affiliated spirits (252). Consequently the 'formes of the Imagination' can be 'insculped or engrauen in the aery spirites' and vice versa, since 'the aer is full of formes...so our spirits which are aery doe easily admit all species or formes of things' (312). The spirits are on a continuum, from the natural most material and bloody ones to the almost immaterial airy animal spirits, with the relationship between the air and the spirits a system in which shared properties result in the flux of species in and out of the transpirable body and mind.

Described in these texts is a system in which brain, body and world blow through, and flow leakily and violently into one another. Paster explains that our failure to recognise the different character of an emotional experience in early modern texts is connected to our failure 'to recognise how the porous and volatile humoral body, with its faulty borders and penetrable stuff, interacts differently with the world than the "static, solid" modern bodily container' (*Humoring* 23). Like EM, these early modern models for the body and emotions emphasise the fluidity and malleability of humans to cognitive experience. Lemnius, for example, offers this image:

...the mindes and bodyes of men be in a maner as it were yong Sproutes & trees, which being artificially handled...may like soft waxe, or as tractable and moyst claye, be fashioned, framed and made applyable to learne any knowledge, and vertue, any

ciuilitye: and by artificiall instruction bee trayned to conceyue Artes and behauour both comely and commendable. (Lemius 3-4)

This suggests the potential for the cultural shaping of human beings, as well as the innately fluid physical and mental properties which enable this. Coeffeteau's translator praises his patron that his 'disposition to all goodnesse is in nature most sweete, most flexible' and invites him to 'vouchsafe eare a little to artificiall and experimenc't aduices, that may rectifie, accomplish and establish you' (sig. A4r). Human minds and bodies were understood to be particularly pliable and adaptable, as further explored in the penultimate section of this chapter, with comment on one's versatility or flexibility a form of flattery.

Yet, the mutability of the subject was understood both as a glory and an anxiety. Dollimore argues that it is in particular during expansionist eras that mutability is perceived in terms of 'radical psychic insecurity', with anxiety and alienation in effect the stuff of the subject's creation (*Death* 92). As evidence of a heightened early modern sense of this, he quotes William Drummond's observation that the 'Body is but a Mass of discording humours...which though agreeing for a trace of time, yet can never be made uniform' (91). This insecurity was driven by consciousness that man was made from matter that was not only mutable, but was also therefore necessarily subject to decay. Drawing on classical sources, Crooke reaffirms the powerful commonplace of the necessary corruptibility of sublunary elemental matter: 'That all things vnder the Moone...all things I say contayned within the Elements are subject to corruption and dissolution' (199; see also Davies of Hereford 'Civile' 185).

Spenser offers a richly subtle account of the nature and value of human mutability. The 'Mutabilitie Cantos', latterly appended to *The Faerie Queene*, concern a trial to settle the extent of the rule of Mutability, who pretends to be sovereign over men and Gods. Mutability's argument includes her power over water, air, fire, and the Earth (7.25.1-3). Nor does she allow man's mind to elude her realm of influence: 'Ne doe their bodies only flit and fly:/ But eeke their minds (which they immortal call)/ Still change and vary thoughts, as new occasions fall' (7.19.7-9). Nature points out that despite, or rather because of, all things incessant change, self-extending and self-creating motion rather than disorder is at work:

They are not changed from their first estate;
But by their change their being doe dilate:
And turning themselves at length againe,
Doe worke their owne perfection so by fate:
Then ouer them Change doth not rule and raigne;

But they raigne ouer change, and doe their states maintaine. (7.58.4-9)

Nature describes living entities that universally 'dilate' suggesting both openness and extendedness as natural to the properties of things. It is part of their autopoietical nature to reach beyond their initial sphere, and this enables them to turn back on themselves, in order to work towards their fuller realization and in fact preserve their natural condition. This echoes the epistemological topoi which emphasise the need for humans in this life to extend their minds through their senses into the world, thereby enabling themselves to achieve knowledge. This culminating passage to *The Faerie Queene* suggests that in fact this particular human drive reflects a universal aspect of all of creation. Clark's theory that humans are natural-born cyborgs, also suggests extendedness is a principal evident in other life forms, using the example of the heavy tuna fish who uses the wave flows to aid its movements through the water (*Mindware* 143), and the social and ecological offloading of even basic life forms is also the focus of the works of J. Scott Turner, mentioned in Chapter 1. Spenser's understanding of this is of course enfolded by Christian beliefs. The eighth and final brief canto concedes that Mutability rules all except the Heavens, but continues that it shall soon be cut down by Time's sickle, after which there shall be no more change but the hoped for steadfast Eternity with God.

Crooke similarly offers an elegant explanation of the divine purpose of elemental mutability, and makes it a parallel to the immortality of the soul. Although man is 'a compound creature', this is tempered by the fact that 'the matter of all things is eternall', because the 'dissolution of created things is but a resolution of one thing into another', through a perpetuity not of particular things but of the elementary parts of nature (198) Human's elemental matter directly and indirectly participates in and is reformed into similar and new forms of matter. Furthermore fruits, trees, plants and all living creatures 'containe in it a power to frame a new all parts of the bodie from whence it yssued' (198):

For so euery *indiuiduum* extending it selfe as it were, in the procreation of another like vnto it selfe, growth young againe and becommeth after a sort eternall. The father liueth in the sonne, and dyeth not as long as his expresse and liuing Image stands vpon the earth. (200)

Early modern concepts of the mind and of the subject are permeated by notions of their extended nature, both by means of their soul and through their body. Similarly foresightful insights in Shakespearean imagery, have led a journal on clinical genetics to suggest they form a prehistory to genetical theories (Berg 165-70). The

prescience of this insight, shared by early modern thought, also stretches to alternative memetic forms of extension, such as the use of words as a form of immortality or of extended cognition, as discussed in later chapters. These optimistic versions turn things on their head: rather than mutability leading to death and corruption, it results in the subject's extendibility through time, via body and soul, in sustained, renewed and metamorphosed forms. Despite early modern concerns over human materiality, these theories incorporate evidence about the role of the world, body and mind in cognitive processes, and share with EM interest in the role these factors play in enabling the very flexibility, hybridity and extendibility that make us human subjects.

Microcosms and Hybrids

The early modern period involved a renewed exploration of humanity's roles, functions and capabilities. The human subject was understood to have an extended mind, with its capacities enabled as well as limited by embodiment and their intimate relation to the earthly world. Helkiah Crooke again captures the optimistic angle on this in his powerful model of the self and its intimate relation to the world and to God:

SEeing then that Man is a Litle world, and containes in himselfe the seeds of all those things which are contained in the most spacious and ample bosom of this whole Vniuerse, Starres, Meteors, Mettals, Minerals, Vegetables, Animals, and Spirits; whosoeuer dooth well know himselfe, knoweth allthings, seeing in himselfe he hath the resemblances and representations of all things. First, he shall know God, because hee is fashioned and framed according to his Image...; he shall know also the Angels, because hee hath vnderstanding as they haue; he shall know the brute Beasts, because he hath the faculties of sence and appetite common with them; he groweth as the plants do, hee hath being and existence as stones haue, and in a word, he is the rule and square of all bodies. (12)

This model not only involves analogies, but also qualities of existence and experience that a man alone holds in common with all other created forms. Crooke is not just describing a system of similarity, but of shared kinds of faculties. He constructs humans as potential participants of all levels of being and knowing in the world, and even of the Angels and God, through the properties of man's body, mind and soul. In this model the influence is apparent of two seminal texts of the Italian Renaissance, which this section will explore: the first by Marsilio Ficino and the other by his friend Giovanni Pico della Mirandola.

Neoplatonic ideas contributed to the topos of man as 'a little world', however seldom are they as uncloudedly celebratory as in Crooke's account. The reason is made evident by Marsilio Ficino's widely influential treatise *Five Questions Concerning the Mind* (1477) that set forth this topos. Ficino's concept of motion directed by and to an end that harmonises with its origin (as later in Freud, 'Beyond' 612-13) was accompanied by a belief that the human intellect 'extended' more widely and perfectly than its body, and 'to things diverse and opposite' that often oppose the inclination of the body (204-5). Whilst 'sense', the 'beast in us', can achieve its desired end, reason, which is peculiar to man and causes his 'deliberation and versatility', means that the 'man in us' cannot reach his end in this life; therefore man leads a vacillating and distressed existence torn between these contrary goals (206-8). Man's intellect means that unlike other creatures his ends lie not only in this world, but also in the next, and this causes conflict; the fractured subject, as with psychological models, is caused by tensions between different aspects of the subject. Ficino's model also contains elements that prefigure the cognitive models described by Wheeler that seek to separate mind from nature, as mentioned in Chapter 1. Humans are 'outside the order of nature' and thus 'live and suffer contrary to the order of nature', miserable both due to the infirmity of the body and the anxiety of the mind until he attains his own body made everlasting in the next life (209-12). Thus, in Ficino's model, both body and mind extend, with the emphasis on the earthly body's inability to extend as widely as the human mind.

Following in poetic prose both the implications and the emotional peaks and troughs of Ficino's work, Donne disrupts the tautology of man as world in 'Meditation 4: the Physician is sent for' (*Devotions* 19-21). He inverts the world and man's scales to demonstrate the comparison's insufficiency: 'It is too little to call *Man a little World*'. Analogies are conjured and simultaneously ruptured: were man's parts 'extended' he would be the world and the world a map, his veins rivers, his sinews mines, his muscles hills, and his bones quarries (19). Sawday comments on the early seventeenth century drawing of comparisons between anatomical and geographical exploration: 'The body was territory, an (as yet) undiscovered country, a location which demanded from its explorers skills which seemed analogous to those displayed by the heroic voyagers across the terrestrial globe' (*Body* 23). This appeared in lyrical conceits, Sawday explains, such as Donne's addressing of the female body as 'my America, my new found land' ('Elegy 2: To His Mistress Going to Bed' 27). Poetically realised here is what Valerie Traub also comments on as the use of 'similar tropes of exploration and discovery' by anatomies and travel narratives which 'share a common imperative to chart, catalogue and colonize the

body' (197). The general wide-ranging associations of bodily features are reflected by Florio's translation in his dictionary of the Italian 'Vena', as: 'the natural disposition, instinct or veine of a man. A pulse or an arterie. Also a veine of the earth. Also a veine or stile of writing or speaking.' Thus Florio moves from dispositional to geological to corporeal to cultural realms without any sense of incongruity.

Yet, it is the ultimate failure of the analogy between the world and man that receives the emphasis in Donne's 'Meditation 4': since whilst man contains a relation to everything in the world, he also contains 'many pieces, of which the whol world hath no representation' (19). Whilst man's thoughts are 'creatures' of infinite span which 'comprehend all', he their 'Creator' is trapped within the prison of his sick body. Thoughts as extended cognitive processes that can escape the confines of the body are juxtaposed with a human subject who remains body-bound: this is the 'Inexplicable mistery' of human nature for Donne: the extended mind placed in a limited corruptible body (20). Since humans are without the instinct of animals to heal ourselves, and conversely consume ourselves with self-destructive thoughts, we must send for the physician (20). This destabilizes man's supposed superiority:

Call back therefore thy Meditations again, and bring it downe; whats become of mans great extent & proportion, when himselfe shrinkes himselfe, and consumes himselfe to a handful of dust; whats become of his soaring thoughts, when himselfe brings himselfe to the ignorance, to the thoughtlesnesse of the *Grave*? (20-21)

Our extended minds must be recalled to acknowledge our human bodies and mortal state; for this embodied state shrinks the mind too, circulating thoughts in a self-consuming torment that reaches not to the heavens but to inanimate dust.

Kristeller notes the concepts of man's exalted place in the universe and of his powerlessness, are not only contrary but complementary, and so well grounded in human experience as to be permanent features, with the emphasis on one or the other dependent 'on the mood of the period or even of an individual thinker or writer' (Kristeller 180). They are often remarked on together, as Davies comments: 'I know my selfe a *Man*, / Which is a *proud* and yet a *wretched* thing', and Burton's opening subsection, where he describes man as 'a little world', is entitled: 'Man's Excellency, Fall, Miseries, Infirmities' (*Nosce* 8; 1.1.1.1). In his elegiac poem 'An Anatomy of the World' (1611) Donne describes the mind as well as the body as shrunken:

And as our bodies, so our minds are cramped:
'Tis shrinking, not close weaving, that hath thus
In mind and body both bedwarfed us' (152-154).

Donne's use of the topos here again evokes the wretchedness implicit in man's comparison with the world. Then his satirical employment of 'the little world' topos, in 'Holy Sonnet 15' similarly makes explicit that it is both elemental and spiritual aspects of man that are worldly, sinful and thus fallen and mortal:

I am a little world made cunningly
Of elements, and an angelic sprite;
But black sin hath betrayed to endless night
My world's both parts, and, oh, both parts must die. (1-4)

As in these extracts, Richard Strier shows that for Luther it is not just the flesh that is fallen but 'the body and soul, including our reason' (29). This contributes to Strier's wider argument that the idea that Western tradition has always valued order, reason, self-control and decorum is a distortion of intellectual history (42). Emphasis on human degeneracy, especially amongst Protestant Reformers, reacted against exaggerated humanistic praise. Underlying either polarised positivism or pessimism, or any of the degrees spanning or paradoxically combining these extremes, the dominant tendency was towards a reinvigorated interest in the embodied, embedded and extended nature of the human being.

The man-as-microcosmos model Bacon argues is true to the extent that humans are the most diversely composed due to the greater variability of humans' bodies and lives in comparison with animals:

Adde hereunto that Beasts haue a more simple order of life, and lesse change of Affections to worke vppon their bodies, whereas man in his Mansion, sleepe, exercise, passions, hath infinit variations; and it cannot be denied, but that the bodie of Man of all other things, is of the most compounded Masse. (*Advancement* 96-97)

This analogy does not include the soul as Bacon describes it as conversely 'the simplest of substances', but this apparent disjunction is undermined by the fact that whilst it resides in the body the soul 'enjoys no rest' as the 'variable composition of mans bodie hath made it as an Instrument easie to distemper' (97). Montaigne uses the topos chiefly to ridicule philosophers' attempts to anatomise man: 'Truly they had good reason therefore to call it the little world, so many pieces and facets have they used to plaster it and build it' ('Apology' 487). The early modern microcosm-macrocosm topos implies resemblance, duality and reflection. Yet, notions of reflection and duality are impeded by the fact that a subject's perceptions are rooted in humoural human's distributed nature, which is formed from and by the mind, body and world flowing into each other. Nevertheless, there are also evident tensions

between understandings of the mind as extended through the material and mortal body, and its potential to extend imaginatively beyond the body, prefiguring its future abilities to transcend the mundane world.

Close friend to Ficino as he was, Pico della Mirandola's syncretistic 'Oration on the Dignity of Man', written around 1486, whilst also seeking for a more personal concept of human nature compatible with the tenets of the Christian faith and his humanist philosophy, put the emphasis instead on human's uniquely 'indeterminate nature', reinforcing the parallels between humanity and hybridity that earlier classical and medieval theories had explored (224). Pico firmly situates human metamorphoses within the Christian schema by retelling the creation myth, describing that as all the powers were already allotted by God, man alone was given no fixed properties and the capacity to participate in the properties of all other things. Pico repeats Aquinas' belief that according to free will, man from his central position may degenerate down the ladder of souls to the bestial or ascend upwards to the higher forms, but in Pico, there is increased emphasis on human transformability and on the extent of our freedom in creating ourselves. God states:

We have made thee neither of heaven nor of earth, neither mortal or immortal, so that with freedom of choice and with honour, as though the maker and molder of thyself, thou mayest fashion thyself in whatever shape thou shalt prefer. (225)

Man is described by Pico as a 'chameleon', whose 'mutability of character' and 'self-transforming nature' was symbolized by 'Proteus' and by Hebrews' and Pythagorean accounts of metamorphoses (225-6). He also approvingly quotes the Chaldeans' saying that 'Man is a being of varied, manifold, and inconstant nature.' (227) Evident here is a parallel awareness of human subjectivity to EM in terms of a shared understanding of human hybridity, multiplicity and mutability, but as interpreted within a Christian schema. The injunction 'Know Thyself' Pico explains 'encourages us to the investigation of all nature, of which the nature of man is both the connecting link and, so to speak, the "mixed bowl"' (235). Thus, self-knowledge is also intimately interrelated to knowledge of the natural world by Pico.

Davies makes evident the wider acceptance of these views, as in *Nosce Teipsum* he imagines the Ovidian mythical tales of human transformations as literalisations of man's tripartite nature and his ability to rise and descend into other forms:

And these three powers three sorts of men do make;
For some like plants their veins do onely fill;
And some like beasts their senses pleasure take;

And some like Angels do Contemplate still.

Therefore the fables turnd some men to flowers,
And others did with brutish formes inuest,
And did of others make Celestiall powers,
Like Angels, which still trauell, yet still rest. (53)

Davies here exhibits the fruits of humanism too, with this awareness of the ways in which shared underlying beliefs can be expressed differently by different cultures. Meanwhile, Crooke also describes the wonder that man 'can suddenly (Proteus-like) transform himselfe into any particular thing' (3). Thus, the metamorphoses of which man is capable are understood as his fundamental nature.

The artworks of Pieter Brueghel the Elder and his followers such as Pieter van der Heyden figure the psychological fantasies borne by notions of the protean and hybrid body, with dreamlike fantasies of deformed and disjointed bodies (Milne 117). In their depictions of the nightmarish undertow associated with hybrid and fragmented subjects, these artworks prefigure the Lacanian mirror stage, in which the assumption of identity is plagued by fantasies of disjointed limbs ('Mirror' 4). Phillip Stubbes' *The Anatomie of Abuses* (1583) make protean changeability a curse rather than a wonder of humanity, and describes women as the most culpably mutable: 'Proteus that Monster could neuer chaunge him self into so many fourmes & shapes as these women doo, belike they haue made an obligation with hel and are at agréement with the deuil.' (sig. F5r) Phobic literary forms also appear in the works of Davies of Hereford, who describes an alternative scale of gluttony, upon which the need is to eat lest the eaters otherwise fall to slime, and who justifies the plague as made necessary by man's 'ill-directing Wit', which has led man, who should be horizon between angels and beasts, instead to be horizon between beasts and fiends ('Humours' 6; 'Triumph' 245).

Yet it is without intended satire or paradox that examples of animal characteristics were used to shore up explanations of human nature. Emily Michael describes 'the traditionally recognised commonality between human and animal sense experience and imagination' that was connected with 'corporeal sense cognition' (172). Crooke describes how in mankind 'you shall finde manie that haue the stomacke of an Estrich; Others, that haue the heart of a Lyon; Some are of the temper of a Dogge, many of a Hog, and an infinite number of as dull and blockish a temper as an Asse' (5). Coeffeteau proves that the irascible and concupiscible powers are separable in humans by describing how there are animals which have desires but no choler, such as sheep, pigeons and turtles (9). Erica Fudge in her book *Perceiving Animals* describes that early modern anthropocentrism nevertheless results in

destroying the category of 'human' as well as blurring animal with human nature: 'if anthropocentrism – placing the human and human vision at the centre – leads...to anthropomorphism – seeing the world in our own image – and anthropomorphism allows for the animalisation of humans then anthropocentrism paradoxically destroys *anthropos* as a category' (7-8). Since this was not just an anthropocentric, but also an androcentric culture, a woman's place on the ontological ladder, is portrayed below men but above animals by Rogers, who in *A Paterne of a Passionate Minde* (1580) describes that 'Idlenes maketh of men women, of women beasts, of beasts monsters' (sig. A5v). Mark Breitenberg describes anxious masculinity in the early modern period as arising from sex based assumptions about power, privilege, sexual desire and the body (1). This sliding scale all the more vividly accounts for the anxiety of men that they may slip into an indolent effeminacy and thence degenerate to bestiality.

More positively, and as in EM accounts, the particular hybridity of humans is described by Crooke as having a material cause: 'For the matter of mans body, it is soft, pliable and temperate, readie to follow the Workeman in euery thing, and to euery purpose; for man is the moystest and most sanguine of all Creatures...' (5). This plasticity particularly applies to the nature of the human brain, which Crooke describes as 'white, soft and very moist' (507) Moistness and softness of the brain, which is especially evident in the brains of children allows 'a facility of learning', because the brain is 'of such a substance as is fit to receiue the impressions of other things' (455). Human reasoning is also described as enabled by 'the amplitude or largenesse of the braine and of the ventricles and the plenty of the spirits' and by 'the Temper of the marrowy substance and of the spirites' (507). To demonstrate anatomy's theological significance, Helkiah Crooke invites the reader on a tour of the wondrous brain with its 'Labyrinthean Mazes and web of the small arteries, the admirable trainings of the Veines, the draining furrowes and watercourses, the liuing ebullitions and springings vp of the sinnewes' (15). Many are the terms used to describe the parts of the brain that suggest fluidity, leakiness and complexity: 'Canales or pipes', 'rillets', 'perforated manifold like a Siue', 'holes or passages', and 'winding meanders' (445-46, 449, 457). Crooke also describes the brain, as both involving areas of specialisation and involving promiscuous sharing between regions, as also believed by the current neuroscientific studies explored in Chapter 1:

...the braine is the seate of all the Animall faculties as well Sensatiue as Principall...The whole Schoole of the Arabians hath imagined certaine mansions in the braine, and assigneth to euery particular faculty a particular seate...We answere, that we thinke all the principall faculties are contained in the whole braine, but we do

not deny but that one faculty is more manifest in one ventricle then it is in another...
(504, 506)

Early modern conjectures about the brain, had a considerably less well developed scientific basis than those which support EM, but nevertheless there is evidence of comparable understandings of the brain's operations as distributed, fluid and plastic; and, then as now, this was connected to discussions about the variability and agency of the human subject. The early modern brain and body are described as being impressionable, pliable and fluid (with potentially positive or negative effects); further evidence that early modern human subjects were conceived of as physically poised for symbiotic and transformative relationships with the world. Thus, these discourses provide particular early modern instances of the recognition of the universal constant of human adaptability and extendibility.

Conclusions

This chapter demonstrates an earlier awareness of ways in which subjectivity and the mind can be understood as multiple, mutable and extended. Even in those models which emphasise humans' potential for reason-centred cognition there emerges evidence that the ensouled body necessarily relies on forms of physical cognition, and this led to some controversial theories. Generally, the soul was understood to be dispersed over the body and to perform both cognitive and bodily functions on multiple levels via a mass of quasi-autonomous agents, which operate not only in accordance with the conscious will, but are also motivated by the animal instincts and nature. Humoural theories about the interactive and reciprocal relations between brain, body and world make clear the transpirable and transfluxible nature of the human subject, with beliefs that whilst humans are determined by inherited and environmental factors, they can also fundamentally alter their given natures. The passions, whilst being seen as a potential source of shipwrecking the subject, were also a means of guiding reason to long term goods and virtue and were interlinked to humoural body states. Physical mutability was understood both in phobic terms and also as a parallel to the immortal soul, in terms of matter's reformation into other forms, and human and other species extendibility through physical and mental offspring. Ficino's notions of the mind and to a lesser extent the body as extended, and Pico's concept of the hybridity and universality of man, were seminal influences on early modern notions of human subjects.

The early modern subject is portrayed as composed of the same properties in the brain and body, as exist in other people, objects, and all of creation, although humans' particularly moist and pliable physical form contributed to humans' adaptability and rationality. Evidence from early modern texts and the recent attention by literary and historical critics to the central role that humoral discourses play in the perceptions and experiences that the early modern subject has of itself and of the world suggest fertile correlations can be made with the recent discoveries in the cognitive sciences as to the mind's distributed and fluid nature and of the operations of the emotions and the body in cognitive processes. Early modern texts present a wide range of evidence that neurological and physiological structures were understood to participate in cognition, and that cognition operated through a combination of conscious and non-conscious processes, willed and autonomous subsystems, and plastic and hardwired processes. As in current EM the 'control-sharing coalition of processes' that were thought to make up the early modern subject provide an interactive basis through which the subject dynamically extends itself into the world and through which the world is incorporated into the subject (Clark, *Natural-Born* 138). However, unlike current EM, the soul (and mind) is portrayed as capable of intellectual flights portrayed as a God-like extendedness that forefigures the capabilities of the immortal soul. This chapter demonstrates that interesting correlations and disjunctions are evident with extended mind ideas; these invite us to question assumptions we might make about the meaning of early modern terminologies and beliefs and to consider the historicity of ideas about the mind and subject as embodied, embedded and extended.

Early Modern Language and Memory Forms

The modern researcher's desk, cluttered with leaves of paper and writing implements, overflowing with opened books piled on top of one another, had arrived. (7)

Neil Rhodes and Jonathan Sawday accurately conjure a vision of the desk before me strewn with mounds of paper and gaping books; only the addition of my laptop is necessary to transform the early modern version into my present. This chapter explores early modern parallels to modern notions of extended minds and subjects through an exploration of early modern discourses about forms of language and memory, which make evident an especially marked consciousness, concern and celebration over humans' permeability and extendedness. Early modern attitudes to language were based on, and extensions of, attitudes towards being human, with the ambivalent opinion of the printed, written, and spoken word reflecting ambivalent views about the nature of the human subject. As language is a fundamental factor in human cognitive processes and subjectivity, ambivalence about language is often an extension of ambivalence about human subjectivity. Nevertheless, there was often a further ambivalence about whether language supplemented cognitive processes through its similarity to, or difference from, psychophysiological processes.

The opening section examines attitudes to language in the early modern period and beliefs about its effect on cognition and subjectivity, via an exploration into increasing literacy, residual orality, and the impact of the printing press. The next section follows with a discussion of attitudes to language in various literary texts and in early modern rhetorical manuals. The final section begins with a discussion based on the underused resource of character writings, which frequently depict subjects as being book-like or as composed of language, and then goes on to explore concept of texts as extensions of the mind and of the subject.

A Cognitive Fossil Trail

A central aspect of Andy Clark's position is that current apprehension about technological hybrids is unfounded, because such intimate technological relations have always been an essential aspect of humanity. He demonstrates this through describing the verbal and textual 'fossil trail':

We see some of the cognitive 'fossil trail' of the cyborg trait in the historical procession of potent cognitive technologies that begins with speech and counting, morphs first into written text and numerals, then into early printing...They constitute, I want to say, a cascade of 'mindware upgrades': cognitive upheavals in which the effective architecture of the human mind is altered and transformed. (*Natural-Born* 4)

One pathway on this trail is the history of the book, an area of research that has long been considering the effect on culture, subjects and cognition of the technological changes from orality to literacy and from manuscripts to printing. The two most seminal examples of the extensive literature on these transitions are H. J. Chaytor's *From Script to Print*, and M. T. Clanchy's follow up *From Memory to Written Record*, which both consider the effect on medieval literature of scribal methods. Similarly to the philosophers discussed in Chapter 1 who conceived of language as a 'mind tool', Clanchy comments that 'literacy in itself is primarily a technology' (7). However, unlike them, Clanchy does not consider literacy as just a particularly powerful mind tool but as the only one: 'Literacy is unique among technologies in penetrating and structuring the intellect itself' (185). Following Clanchy, Walter Ong's *Orality and Literacy* unreservedly argues for the need to reappraise the effects upon humans of the technology of writing:

Many of the features we have taken for granted in thought and expression in literature, philosophy and science, and even in oral discourse among literates, are not directly native to human existence as such but have come into being because of the resources which the technology of writing makes available to human consciousness. (1)

Recent critical works have increasingly emphasized the lingering co-existence of manuscript alongside print and the malleability and appropriability of printed texts. There has also been a greater focus on the early modern period in collected volumes of essays, such as: *The Transmission of Culture in Early Modern Europe* edited by Grafton and Blair, which explores how cultural transmission involves accretion and revision rather than replication; and *The Renaissance Computer* edited by Rhodes and Sawday, which examines the new methods of information storage and retrieval that followed the spread of the printing press and draws comparisons with the current digital transformation of technology. The widening interest in the materiality of texts has led to an understanding of the content of a book as inseparable from its production, circulation and reception; for instance, Margaret Spufford's *Small Books and Pleasant Histories*, discusses the spread of literacy and types of cheap print available, whilst other works pay attention even to the making of the paper and ink (de Grazia and Stallybrass 280-82). The intention here is not to comprehensively

cover the issues raised in the extensive literature on the history of the book; instead this chapter concentrates on a few significant ways in which modern and early modern perceptions of language and memory forms interlink with conceptions of subjects and of minds, in line with the central concerns of this thesis.

Arguably, trends in language media interact with changing perceptions of subjectivity and the mind. Rhodes and Sawday describe the printing press as 'an entirely new social entity' that began 'to refashion the mental world of Europeans' through the transmission of old knowledge which then facilitated the creation of a new philosophy (6, 7). They explain that print culture 'tended to produce a concept of the text as a relatively fixed and stable entity', pointing out how our new digital media is reversing this trend by allowing for more interactive play and creative hypertext (11-12). Our current technological revolution has helped us realise the effects of technological interactions upon the understanding and operating of the mind and subject. The gradual trend towards increasing fixity of text bloomed into the growth of ideas about the fixed nature of the subject that came to dominate enlightenment and post-enlightenment ideologies, whilst the current trend in our media can be linked with an increasing awareness of the interactivity, multiplicity and mutability of cognitive processes and subjectivity.¹

Available tools not only affect perceptions of cognitive abilities and subjectivity, but also radically affect their nature. Yet such views have been questioned: critics have commented that the revolution in astronomy occurred before the discovery of the telescope and that William Harvey's scientific advances took place before serviceable microscopes were available. A response to these critics is offered by Elizabeth Eisenstein who points out in her influential work *The Printing Revolution in Early Modern Europe* that the technical literature upon which these inventions depended had already undergone the drastic changes that enabled the new steps to be taken (256-57). Eisenstein argues that changes produced by printing had a profound effect on the learned professions and on 'cerebral activities' (261), both for natural philosophers (now modern scientists) and biblical scholars:

Intellectual and spiritual life, far from remaining unaffected, was profoundly transformed by the multiplication of new tools for duplicating books in fifteenth-century Europe. The communications shift altered the way Western Christians viewed their sacred book and the natural world. It made the words of God appear more multiform and his handiwork more uniform. (275)

¹ See N. Katherine Hayles' books for further discussion of this topic.

On the one hand, the spread of vernacular bibles had a divisive effect that fragmented the Word of God into many different versions and disjointed the Body of the Church and Western Christendom along religious, sociological and geographic lines. Negativity over books and papers, as associated with theological controversies, is indicated in Spenser's *Faerie Queene* in which 'Errour' is described as vomiting them, and the hypocrite 'Archimago', master of the false image and representative of Catholicism, has a book hanging by his belt (1.1.20; 1.1.29). On the other hand, printing allowed more accuracy, through the comparing and correcting of scientific accounts and images, such as charts, tables, diagrams, and maps, and, where there was doubt, a new empirical system of referring to the world itself (Eisenstein 38). The spread of the book contributed to divisions between intellectual and spiritual perceptions of the world and of books themselves.

The early modern relation to the textual reflects its more general exploratory interest as to how the material world could be utilised as a means toward both a theological and a secular understanding of the mind, the subject and the world; but simultaneously it created a split between these methods of understanding. This reflects the movement seen within early modern literary studies, as the hermeneutics of the medieval period had shifted from the interpretation of scriptural authorities to the interpretation of classical and then of contemporary texts: in all areas of thought ever increasing authority was being given to the secular realm (Minnis 373-94). Although as Eisenstein notes, new discoveries and learning still continued to be related to God via the evidence of the Bible, they were also increasingly related to his creations, the world, and to humans, and in turn to man-made books and creations. An instance of this combining of divine and worldly concepts is given in Bacon. He compares the circumnavigation of the earth by man in his own age to that of 'the heavenly Bodies' above, and global exploration into uncharted territories to contemporary intellectual discoveries of the age:

But to circle the Earth, as the heavenly Bodies doe, was not done, nor enterprised, till these later times: In respect of the many memorable voyages after the maner of heaven, about the globe of the earth...And this Proficiency in Nauigation, and discoveries, may plant also an expectation of the further proficience, and augmentation of all Scyences, because it may seeme they are ordained by God...to meete in one Age.
(*Advancement* 71)

Such correspondences are interactive strands that continue to connect up what will later come to appear as uncrossable divides, between the movements of the heavenly and the secular realms, and the movements of the body and the mind.

Aural-oral and visual-literate cultures also involve different bodily senses of the self. Ong comments that the aural world view of man at the centre of the harmonic cosmos, contrasts with the analytic and dissecting tendencies of sight (70-73). Books make perceptions of language more material, and allow for the development of reading and thinking techniques such as backward scanning and skimming (98). Thus, increasing textuality, Ong argues, results in the development of new forms of cognition and transformed human subjectivity: 'Writing introduces division and alienation, but a higher unity as well. It intensifies the sense of self and fosters more conscious interaction between persons' (175). The materiality of books is reflected in the early modern period by the comparison of texts to physical bodies. The word 'syntax' exposes this connection as it originally referred to any systemic arrangement of parts, including those of the body (Garber 34-35). Meanwhile, the anatomical blazon through poetic praise dissects and anatomises female body parts, such as the eye or the hair. Nancy Vickers describes that the strange fashion for domestic blazons that were then staged as a moral corrective, suggests both a drawing of comparisons and of contrast between body and house parts (3-4). Vickers also claims that blazons 'stage a radical fragmentation of the body' in contrast to anatomical treatises' attempts at 'recuperation of corporal wholeness' (8). Yet, the concept of the body in parts poetically instituted in anatomical blazons, operated on the logic of the soul being 'all in every part' discussed earlier, suggesting a more nuanced relation between these types of texts than the straightforwardly oppositional.

Recent interest in the materiality of texts has also led to work on related topics such as marginalia, which suggest that printing need not directly lead to fixity of meaning. William H. Sherman's *Used Books* makes apparent the cognitive work being done by the common Renaissance practice of readers marking books. Marking books was a means not only of 'attending to words' but also of 'thinking about their arguments', with the mental connotation 'to mark' developing out of the physical practice (3). Sherman highlights continuities across the manuscript-print divide, with the retaining of visual and organizational features from the manuscript tradition and through bookreaders' transformative techniques, with the use of rubrication, curly brackets, decorations of foliage, faces in profile, and the pointing hand continuing into the seventeenth century (7-8). In addition to annotation, since readers could also physically alter books when they were bound or rebound, this invited the addition of blank pages for personalized indexes and tables, the rearranging of sections, and even the recombination of sections with other texts (9). These practices Sherman argues demonstrate that readers were not immediately rendered passive recipients by print technology, but instead were 'active and appropriative' participants, who

challenged 'the integrity of the entire printed book' (9). This suggests that despite the gradual spread of potentially more fixed and stable texts, they were not treated as closed systems, but still remained viewed as open to interactions with its readers for centuries after Johann Gutenberg's development of print technology in the mid-fifteenth century.

An instantly recognizable reason for such an active reading practice lies in another aspect of this cognitive fossil trail: early modern information overload. Modern academics' wonder and anxiety about the proliferation of publications in 'the information age' is paralleled by early modern scholars' reaction to the growing number of books available due to print technology. Technological advances which enabled the production of an ever increasing number of books required that scholars adapt their ways of working in order to deal with the expanding amount of information at their disposal through the development of a number of different sorting methods and memory aids. In order to cope with the increasing number of texts some early modern scholars advised the intensive reading of a select canon, whereas Francis Bacon advised different kinds of reading for different kinds of books:

Some books are to bee tasted, others to bee swallowed, and some few to bee chewed and digested: That is, some bookes are to be read only in partes; others to be read, but cursorily, and some few to be read wholly and with diligence and attention. ('Of Studies,' *Essays* 251).

Instruction how to imitate other authors arms the poet with 'tooles and instrumentes' claims Roger Ascham in *The Scholemaster* (1570) (48). But Ascham, like Bacon, insists on the need to read as many texts as possible, and then follow, in every separate kind of learning, 'choselic a few, and chieflie some one' (56). The styles and matter of other authors are conceived of as mind tools that can be appropriated by another as an aid to their own creation.

Like Sherman, Ann Blair and Daniel Rosenberg describe how glossing, personal additions to indexes, abbreviations and symbols, literal cut and pasting, and notetaking by paraphrasing or by commonplaces were used in order to organise the ever increasing information available. The universal bibliography and book review were also added in the sixteenth century to the thirteenth century creation of the florilegium, encyclopaedic compilations, and alphabetical index (Rosenberg 1-10; Blair 11-28). Thus, offloading information via visual and organizational modes enabled readers to deal with the increasing cognitive load. Evidenced here is the apparently recursive loop whereby early modern technological and organizational

measures developed in order to cope with the advances in technology which had increased the number of texts available. Nevertheless, these technological advances progressively served to extend the amount of information which minds and memories could remember through offloading it in increasingly structured external systems. Therefore it is in fact a spiralling system whereby cognitive roles are altered by previous developments and this in turn entails further technological and cognitive developments.

Commonplace-books, consisting of series of quotes ordered by readers under headings, were particularly popular in the sixteenth century. These in effect were an extension of the active type of reading practice described by Sherman, Blair and Rosenberg, and likewise communicate early modern attitudes to conceptions of language, mind and subjectivity. Ann Moss describes how through the influence of Erasmus' *De Copia* commonplace-books had become part of humanist school education, and were used by schoolboys and adults alike 'for making sense of the books they read, for assimilating the written culture transmitted to them, and for possessing the means of production in their turn' (421). Moss argues that commonplace-books reflected a contemporary view in which the performance of fragmentation was compatible with the structuring of thought and culture (430). Multiplicity could be viewed in terms of a greater unity and extendibility, as the commonplace-book reflects a belief in making a single body from many strands, which contained further generative potentialities (431). Thus commonplace-books operated as an external cognitive artefact for storing, evaluating and generating information, and this example of early modern fragmentation did not necessarily involve psychoanalytical or postmodern notions of lack and rupture, but could be understood as a means of organising a vast array of wide-ranging and counterbalanced units of information in a productive open ended system.

Moss translates a revealing image from Justus Lipsius' *Politica* on the effectiveness of commonplace-books:

The spider's web [*textus*] is no whit the better because it spins it from its own entrails [and remember that the spider is a dangerous species]; and my text no whit the worse because, as does the bee, I gather its components from other authors' flowers. (qtd. in Moss 424)

Lipsius' comment recalls Clark's comparison of humans' biologically proper use of language to spiders' use of a web ('Magic Words' 182). His further metaphor of the bee which gathers honey from a multiplicity of flowers specifically describes the socially distributed nature of production involved in his text. Moss describes this as a

popular metaphor for commonplace-book production, but it was also used as a form of flattery for writers in general (424). Francis Meres in *Palladis Tamia* (1598), itself composed chiefly of translated classical quotations and *exempla*, lists Shakespeare as one of the best contemporary English writers, describing that ‘the sweete wittie soule of Ouid liues in mellifluous and hony-tongued Shakespeare’(623). Meanwhile, Francis Bacon criticizes the scholastics’ lack of wider reading and dependence on ‘the vnequall mirrour of their owne minds’ (*Advancement* 25).

Indeed many influential early modern books such as Montaigne’s *Essays* similarly compile authorities’ quotes under headings, then interfusing and developing these along with their own views, and continuing to revise and add material even after publication. Ben Jonson’s *Timber; Or Discoveries*, also essentially a commonplace book, expresses views through selective borrowing; Jonson describes it as ‘made upon men and matter: as they have flowed out of his daily readings; or had their reflux to his peculiar notion of the times’ (373). This captures a sense of the reciprocity involved, of flux and reflux. It also forefigures Clark’s metaphor of mangrove forests: in the flux of existence, roots of perceptions and beliefs act as trapping mechanisms creating a solid basis for further thinking about the subject and the world. Commonplace books act as an early modern attempt to develop structures that validate or interrogate the place of the human in the world by appropriating the timber of textual matter and men as their basis.

Commonplace-books also stand in for memory, suggesting an easy fluidity between biological and textual forms and between one individual’s memory and another’s. Lipsius’ *Politica*, in the translation by William Jones, describes history as memory in print and applauds ‘historie, which is no other thing, then the soule and life of memory...For in her, as in a glasse, thou mayest, adorne and frame thy life by the vertues of other men’ (14). History is described as superior to individual experience since she safely ‘extendeth her bounds further’ (14). Again there is evident a charting of contrasts and comparisons between individual and social, and biological and textual means of production and forms of memory and mind. Rhodes and Sawday comment that ‘the seemingly limitless world of production, distribution, and retrieval spawned by print technology’ led to the emergence of a new model of the human mind, and suggest the ‘House of Alma’ section in Spenser’s *Faerie Queene* as an example (9). ‘The House of Alma’ represents the body as a castle and the head as a turret with three chief rooms that house the faculties of imagination, judgement and memory. In this ‘mind model’ the old and frail Eumnestes (Gk.: good memory) requires the aid of a young assistant Anamnestes (Gk.: reminder) as they labour ceaselessly in their ramshackle library in which (2.9.58):

...all was hangd about with rolles,
And old records from auncient times deriu'd,
Some made in books, some in long parchment scrolles,
That were all worme-eaten, and full of canker holes. (2.9.57)

Rhodes and Sawday, suggest that the perpetual activity of the librarians in the dilapidated library, where records are 'lost' or 'laid amiss', is an image of the imperfect human mind (9); although it is perhaps worth adding that it is rather an image of one faculty of the human mind, since there are in addition the imagination, judgement and the unexplained 'diverse roomes and diverse stages' in the turret (2.9.47). The textual was not only a means of describing the memory, but was also understood as playing a supplementary cognitive role, whilst historical narratives of the lives of other men were also understood to supplement individual experience.

A similar depiction of memory as a flawed component of fallen man's mind, which again implies the memory's need for supplementation by cognitive artefacts, is given in Thomas Tomkis' play *Lingua*. Anamnestes complains that his master Memory, 'a Rawbond *Skelton*', is every hour calling for him because he has 'growne so old and forgetfull' (E3v). The leitmotif of 'the book of memory' actually dates back to the Middle Ages as described in Curtius (328-47). Many examples are to be found in Shakespeare, such as in *1 Henry VI*: 'I'll note you in my book of memory' (2.4.101); with suggestions that the memory may be altered, in *2 Henry VI*: 'Blotting your name from books of memory' (1.1.96); or that it may not be altered by will alone, as Hamlet unsuccessfully insists: 'Yea, from the table of my memory/ I'll wipe away all trivial fond records,/ All saws of books, all forms, all pressures past,/ That youth and observation copied there' (1.5.98-101). Troublingly, as Montaigne comments, you do not necessarily get to choose what remains and what leaks away:

For memory sets before us not what we choose, but what it pleases. Indeed there is nothing that imprints a thing so vividly on our memory as the desire to forget it: a good way to give our mind something to guard and to impress it on her, is to solicit her to lose it. ('Apology' 443)

Again, the early modern insight into the quasi-independent functioning of aspects of our own minds is apparent, along with a conception of the mind's flawed nature.

Recently Daniel Dennett described how humans attempt to assist memory by means of technology:

We build elaborate systems of mnemonic association – pointers, labels, chutes and ladders, hooks and chains. We refine our resources by incessant rehearsal and

tinkering, turning our brains (and all the associated peripheral gear we acquire) into a huge structured network of competences. (*Kinds* 201).

Mnemotechnics is an ancient discipline and the study of memory has long been concerned with the potential effects of technology upon culture, subjects and cognition. Renaissance humanism, as well as contributing to modern textual scholarship and the development of printing, encouraged the adoption of mnemonic techniques employed by classical rhetoric. The still standard reference book in this area is Francis Yates' *The Art of Memory* that revealed the way in which knowledge is structured for and by the mnemonic arts used to store it. From Greek antiquity into the early modern period, architectural spaces were associatively used to visualise knowledge, by attaching a sequence of information to a sequence of places or features within a building or memory theatre, so that you could then recall the information by visualising the architecture (2-3). Memory systems operated according to a special system of classification; Bacon describes them as a type of 'constitutive instance' that aids recall by ordering through the use of 'places' (*New* 142). The belief that the art of memory was a prerequisite for *The Arte of Rhetorique* (1553) is confirmed, for example, by Thomas Wilson's inclusion of a long section on the mnemonic arts: 'They that wyll remember manye thynges and rehearse them together out of hande: muste learne to haue places, and digest Images in them accordingly' (114). Thus the memory arts could be simply a practical means of supplementing the memory.

Yet Neoplatonists, and to a more extreme extent followers of Hermes Trismegistus, believed memory systems operated analogically and offered the key to all knowledge by means of uncovering the underlying connections of all things: the infinite unity beyond all diversity (129-59). In Giordano Bruno's use of the memory arts in the late sixteenth century, he was conscious of his intellectual debt to the tools of the external world: 'we realize that we can complete no action of any kind befitting our nature without certain shapes and figures conceived from sensible objects through the external senses, then gathered and ordered internally' (qtd. in Copenhaver and Schmitt 292). Evidently Bruno believed that human cognitive capacities necessarily only reach their full natural potential through the internalisation of external forms and models, as does Dennett. Ong in his review of Yates emphasises that since the memory spaces are conceived as something the individual is inside of or looking into 'the space and its contents are felt in one way or another as an extension of oneself' (257). This suggests that mnemotechnics make use of the plasticity of concepts of mind and subjectivity, which enable humans to

adopt external or internalised organisational structures to supplement biological modes of organising information, ironically in order to enable us to fix and stabilise the mind.

A reanalysis of memory arts is used by John Sutton to demonstrate the applicability of EM to this period. He convincingly argues of such systems that: 'They are cognitive even though they are not, in a straightforwardly ancestral way, natural and biological; and they are extended even though they are not literally external' ('Spongy' 26). Evelyn Tribble in her paper on memorisation in the Globe also demonstrates that methods of distributed cognition were used to train novices and that plots (scenario instructions) acted like two dimensional maps to get actors into the right places and so trigger the correct lines. Therefore Tribble argues that there has previously been a misunderstanding of the playing system due to the view of memorisation as individual rather than collaborative ('Distributing' 151).

Another paper by Tribble follows the transition from the sensory modalities and mass-centred worship of Catholicism to Protestantism's emphasis on recall, and sermon and book-centred worship. This called for the utilisation of cognitive artifacts and scaffolding, which took the form of infrastructural changes, motivational injunctions, and pedagogical methods. Preachers' insistence that external tables, illustrations and doctrines should also be imprinted in the mind to act as memory aids, Tribble argues, demonstrates that: 'Determining whether such tables are internal or external cognitive artifacts is impossible; what this example shows is precisely the permeability of such boundaries within a distributed model of cognition' ("To Ease") The mnemonic work of the sermon was distributed between the preacher, who was to use headings and subdivisions to ease recall, and his congregation, who in turn would use these later to recreate the *chain* of reasoning ("To Ease"). Yet, shared memory technology is continuous rather than a new departure; it was already common in medieval sermons. For example, this trope of the chain was in use as a medieval border illustration of a manuscript, with the depiction of fish (symbolising Christians) that form a chain drawn by memory hooks (Carruthers 332).

These three papers add further density to a picture of early modern memory systems as potentially textually and socially extended. Mnemonic systems make evident that what we often conceive of as the products of exclusively internal mental processes, in fact take place through the use of cognitive tools. They demonstrate that such cognitive tools are not necessarily wholly external, but may also be a form of stored knowledge or a method of storing that is internalised. Lastly, the external and internal, or the natural and artificial, are shown at times to be so mutually interwoven as to be indistinguishable from each other.

Thus, the printing press, increasing literacy and the spread of cheaper texts led to new models of the subject, the mind and the memory, and changed the way in which subjects thought, acted and interacted, though literate culture was built on an underlay, and interwoven with, aural-oral traditions. Notions of language were interrelated to notions of the body and to the corporeal experience of different forms of language. Early modern concern with information overload and deficiency of memory are countered by more positive accounts of textual artefacts as supplementary cognitive resources. Whilst other texts in comparing cognitive artefacts do not necessarily make an issue of their biological, technological, individual or social form, but are mainly concerned with their relative advantages for human minds and subjects.

Text, tongue and hand

The generall end therefore of all the booke is to fashion a gentleman or noble person in virtuous and gentle discipline. (15)

Spenser in this letter expounding the intention of *The Faerie Queene* 'to fashion a gentleman' makes apparent early modern belief in the power of the book to shape a person. This section focuses on language's power to shape the subject, and also examines anxieties associated with language technologies. Rhetoric was believed to assist, enhance and extend the capacities of the mind. However, concerns about rupture between the tongue and the heart, the said and the felt, contributed to contemporary interest in gestures as a reference guide to the mind and the man who used them. Language was perceived as fundamentally human. On the one hand, this led to depictions of it as an essential supplementary resource, or even as a new perceptual modality, a sixth sense. On the other hand, concerns about being human were projected onto forms of language, and this section begins with a brief consideration of the continuity evident in concerns about new technologies.

Concerns about linguistic technologies can be traced back to Plato's *Phaedrus*, in which Socrates tells an allegorical story about the relation of the written to the spoken word. The Egyptian inventor Theuth offers to king Thamus the invention of writing, which he claims will improve both intelligence and memory (274e). Thamus responds that writing has a number of pernicious flaws: it will cause forgetfulness as users rely on external signs instead of internal resources; it will only be able to store what is known not to transmit learning authoritatively; it will be passed on to unsuitable recipients; it will be incapable of defending itself as it requires its 'parent'

to do so (the writing-as-child topos); and it is sterile and does not have the productive capacities of dialectic (275a-277a). The existence of similar early modern concerns about books to those voiced by Plato about writing is evident in Francis Bacon's attempts to dismiss them. For example, Bacon argues that criticism of commonplace books as causing lack of retentiveness and sloth of memory is misplaced, as their partialness allows a concentrated transmission of ideas (*Advancement* 119). Derrida in his consideration of Plato's allegory, comments that its concept of writing as a *Pharmakon*, meaning 'poison' and 'cure', could suggest that writing is both a threat to the spoken word and a beneficial means to transmit it (*Dissemination* 75). Ambiguity in the early modern period to perception of printed texts also employed this double conception of textual matter as poison and cure, even in terms of their practical distribution. George Wither in his comparison of good and bad stationers' shops, compares them to apothecaries, and places much of the responsibility in their hands for delivery of the 'drug' to only the appropriate partakers:

And, seeing the State intrusteth him with the disposing of those Bookes, which may both profitt & hurt, as they are applyed, (like a discreet Apothecary in selling poysonous druggs) he obserues by whom, & to vvhat purpose, such bookes are likely to be bought vp, before he will deliuer them out of his hands. (*Schollers* 117)

Wither employs the notion that books' pharmaceutical-type application can advance or endanger the state's interests, with books' potent ambi-valence requiring that stationers oversee their distribution. Such wariness over the distribution of textual knowledge highlights early modern recognition of its powerful shaping of the mind and man.

Greenblatt persuasively argues that the use by Protestants of the Bible, which led to the shifting of authority from the church to the book, also carried over to belief in secular texts' ability to carry out 'a coup in the very heart of the individual' (*Self-Fashioning* 119-20). Greenblatt conceives of such fashioning relations as involving 'identity as achieved at the intersection of an absolute authority and a demonic Other' (76). Anxiety about texts' bypassing the safeguard of transmission via a guiding authority is certainly evident. Monitoring of texts and discourse through other means than stationers was in place, particularly through religious, political and literary censorship with stringent punishments, including imprisonment, dismemberment and execution. Ironically, the allegorical description of a slanderous poet whose tongue was nailed to a post in *The Faerie Queen*, symbolized a fate that threatened Spenser himself later for having insulted James VI's Catholic mother, by presenting her thinly veiled as the heretic Duessa (hypocrite) in this same epic poem

(5.9.25). Thus, the early modern state was concerned with safeguarding against the potent dangers of mind- and subject-shaping texts.

Ambivalence about printing can be allied to a continuing ambivalence about speech in the early modern period, and even about thoughts composed of language. In the Christian schema Jesus and the Bible as the living and written word of God and man as God's image is juxtaposed by the Tower of Babel and the Fall. Arguably, this paradigm of Western thought remains the same without God in the equation: the formativity and potency of language is contrasted with its lacks and impotency, for example, in the Lacanian concept of language discussed in Chapter 2. These are diverse flowerings of continuing shoots of thought, once evident in classical, medieval and early modern views now present in modern manifestations. The supposed flaws of technologies were seen, when taken back to the root, as a result of our own human 'flaw'; yet conversely human superiority was also held to be achieved and made evident by these same technologies. Chapter 3 explored evidence of ambivalence concerning human dignity and wretchedness in relation to psychophysiology, and this is also evident in attitudes to language, as the following description by Donne demonstrates:

Yea words which are our subtillest and delicatest outward creatures, being composed of thoughts and breath, are so muddie, so thick, that our thoughts themselves are so, because (except at the first rising) they are ever leavened with passions and affections (*Letters* 110)

Words and cognition whilst judged as high up the epistemological scale due to their relative immateriality are nevertheless troublingly embodied. Colin Burrow imaginatively describes the above quote from Donne as suggesting that, 'Thought was for him a bubble of spirit which almost instantly lost itself in a mire of flesh' (5). Donne's view of cognition metamorphosed into language sees it as a momentary original distinction that is muddled, with the literally inspirational suffocatingly impaired by human psychophysiology.

However, a variety of models existed on this theme. Early modern understanding of the nature of language can be considered in terms of a form of extended subjectivity or extended cognition; it need not involve Greenblatt's concept of 'identity as achieved at the intersection of an absolute authority and a demonic Other' (*Self-Fashioning* 76). For example, as in *The New Organon*, Bacon argues in the *Advancement of Learning* that humans need tools to aid their cognition. The cause for the limitedness and uncertainty of human knowledge is not just attributable to the senses, but generally to the intellectual powers' weakness (111). Bacon states

that he explains this to stir us up to seek help from tools, giving the illustration that ‘no man, be he never so cunning or practised, can make a straight line or perfect circle by steadinesse of hand, which may bee easily done by helpe of a Ruler or Compasse’ (111). Although words can also cause error because they only reflect the current notions of things, holding only contingent truths, Bacon argues that words are necessary tools, which enable us to recover knowledge, and that writing, as a supplement to memory, enables the retaining of knowledge (110-11; 119). Thus, in Bacon’s account, language is a fundamental mind tool that supplements human’s biological cognitive processes.

The notion of language as constitutive of humanity through both its supplementary relation to and complementary disparity from human biological processes is a theme taken up in early modern accounts of rhetoric. In the preface to *The Arte of Rhetorique* (1553), Thomas Wilson describes that after the Fall, along with the corruption of the flesh, man’s reason and purpose was lost and he became bestial and disordered: ‘Longe it was ere that man knewe himselfe, beinge destitute of Gods grace, so that al thinges waxed sauage, the earth vntilled, societie neglected, Goddes will not knowen, man againste manne, one agaynste another, and all agaynste order’ (sig. A3r). But God’s gift of speech restored man’s humanity and brought civilization, social fellowship and technological skills. Thus ‘of wilde, sober: of cruel, gentle: of foles, wise: and of beastes, men. Suche force hath the tongue, and such is the power of eloquence and reason’ (sig. A3v). Although men are in many things weak by nature they surpass all other creatures due to their having speech and reason; thus Wilson allies these two aspects as unique to man and as what enables man’s superiority (sig. A3v). In the first book, Wilson goes on to remark that rhetoric is an artificial skill (that is, made by art) which delights, teaches and persuades human’s heavy wits and flesh overwhelmed by humours, and which are consequentially especially in need of such delight (sig. a1r-a2v). Thus, Wilson argues for language as a supplement that in effect enables our fundamental humanity, and rhetoric as a complementary and elevating cognitive artefact.

George Puttenham’s *The Arte of English Poesie* (1589) similarly argues that language and poets brought human civilization; however his account is more nuanced, and even seemingly paradoxical in places (3-7). As he negotiates the place of the art of rhetoric in relation to the world and man his concern moves between, and combines, aesthetics and ethics. Figures can involve an abuse of speech through their doubleness, yet Puttenham distinguishes between a poet who is a dissembling courtier and an honest one who instead uses art to aid nature (250-53). The art of rhetoric is diversely described as a surmounter and alterer of nature, a bare imitator

of it, and as contrary to nature. Also, although language is only a little less natural than sensory acts, whilst the senses capabilities are naturally enabled, language requires exercise and iteration; hence there is implied the need for rhetorical guides, such as his own (253-155). The arts can relieve the natural as does the spectacle the eye; it is a prosthetic to the understanding. This is another example of understanding rhetoric as a cognitive tool, with a visual parallel, to which it is compared and from which it is distinguished (256). He stakes out a place for the ‘maker or poet’ who ‘is to play many parts’, he is like the craftsman, carpenter and painter, but with the addition of inventiveness and imagination, is most like ‘the cunning gardiner that vsing nature as a coadiutor, furdurs her conclusions’ and ‘many times makes her to effectes more absolute and straunge’(257). A mixture of diverse views then is voiced by writers in relation to language: involving notions of physiological involvement; as enabling human social and technological redemption; both supplementing and complementing human nature; and as a prosthetic enhancement of human cognitive abilities.

Language is also described as that which allows the mind to be mediated. Mark Robson points out the anti-platonic impulse of much rhetorical thought, which moves from idea to physical manifestation: ‘movement from mind to mind demands a mediating force’ that to work ‘must take on material perceptible form’ (33). This is captured, as Robson comments, in Jonson’s description of language as a mirror of the mind and subject:

Language most shows a man: speak that I may see thee. It springs out of the most retired, and inmost parts of us, and is the image of the parent of it, the mind. No glass renders a man’s form, or likeness, so true as his speech. (*Timber* 435)

Implied here is the paradox that language makes the mind visible by acting as a transparent glass through which to see the mind, and moreover, that language is an image of the mind, the closeness of its relation to the mind being compared with one’s image in a mirror and one’s biological offspring; the latter of which figurally used implies a stronger resemblance than our notion of ‘likeness’ today – as with corporeal ‘metaphors’. Essentially it implies language is an extension of the mind, in a similar way that Crooke describes a child as an extension of his parent (200); this is discussed further in the next section.

Consequent negative views towards those unable to speak are explored in Jonathan Rée’s philosophical history of deafness *I See a Voice*. Rée describes the plight of the deaf from the sixteenth century on, who were often perceived as unreasonable and even subhuman due to their inability to speak. Conversely,

although sign language had not yet been invented, the use of gestures for communication was seen as overcoming the curse of Babel, as is claimed in a prefatory poem in John Bulwer's *Chirologia*: '*Chirologie redeemes from Babels doome, And is the universall Idiome*' (sig. a2v; see also sig. B4r). Another prefatory poem comments on the commonplace of hypocritical division between heart and tongue (feelings and words) finding instead in gesture 'the truest copie of the Minde' (sig. a1v). Various of these poems remark that in setting out the science of gesture, Bulwer is following Bacon who had pointed out that gestures and picture are also used for communication, with the only necessity being that the medium used 'is capable of sufficient differences' (sigs. a2v-a4v; *Advancement* 120). One of the other poems dedicated to Bulwer combines various conceits into a description (odd to modern 'ears') of the book as a hand which 'speakes/ Fresh from the Presses wombe' (sig. a4r). Bulwer claims the gesturing hand expresses 'the silent agitations of the minde', 'presents the *signifying faculties* of the soule' and is '*another Tongue*, which we may justly call the *Spokesman* of the Body' (sig. B1r- B1v). More than this, its competency to express the motives and affections of the mind makes it 'a ready Midwife' which 'takes oftentimes the thoughts from the forestalled Tongue' so that 'our conceptions are display'd and utter'd in the very moment of a thought' (sig. B2v). Evident here is the notion of gestures as involved in transparently communicating thoughts and as a more reliable and immediate agent than speech; with the notion of it acting as midwife suggesting the intimacy of its relation to the delivery and distribution of thought. Gesture is seen as especially in tune with the emotional and appetitive functions, and as representative of bodily agencies. Whilst this does not go as far as modern claims by McNeill and Meadows as to gesture's cognitive role of gesture, this is an early instance of an awareness of it as a operating alongside speech, and providing a further means of reading the mind of the gesturing human being.

Another of the dedicatory poems in Bulwer suggests that the hand's speech has more of a right to be called a sense than '*Lingua*' (language or literally the tongue) who 'did in vain pretend' (sig. a2r). This is very likely a reference to the ideas pursued in Tomkis' play *Lingua*, which is set inside the representational domain of man-as-microcosm, with the acted play literally bodying forth the human faculties. *Lingua* appears personified as a stereotypical unruly woman on stage, 'Lady Tongue', is self-evidently not praise. As Benedict disparagingly says of the forthright Beatrice in *Much Ado About Nothing*: 'I cannot endure my Lady Tongue' (2.1.239). Paster comments that as with the perceived excessive production of bodily fluids by women, their verbal fluency was also marked as lacking in self-control (*Body* 25). *Lingua*

prefigures psychoanalytic and postmodern accounts making evident concerns about the fragmentation and multiplicity of the processes operating in the subject. The play's delivery is ironically itself mediated by language, and whilst *Lingua* is explicitly the disruptive force, the enactment of discord between the other faculties reveals that conflicting perspectives are endemic in man-as-microcosm. *Lingua*'s complaint that Common Sense is led astray by the senses' misinformation, is also indicative of a more general mistrust in the human senses: 'Hee beares the rule, hee's iudge but iudgeth still,/ As hee's informed by your false euidence' (A3v). Tomkis' play relates not only to attitudes to the tongue as a body member, but also reflects general attitudes to speech and subjectivity.

Also apparent in *Lingua* are the displacement of phallic associations onto the tongue and an anxiety about symbolic representations later expressed in Lacanian accounts. Carla Mazzio explains that the tongue was seen as threatening bodily integrity through its movement in and out of the body, and through its extending of the linguistic and material boundaries of the subject (53-57). Concerns over its self-willed nature (as with the penis) carried over to its figural personifications as an unruly member, which is made symbolic of the chaos of sentience and signification in man (59, 68-9). Mazzio also suggests that the fashionable wearing of hoods and jewellery shaped like tongues and the interpretation of types of lettering as literally representing tongue shapes represent an 'aggressive orality' in response to the unsettling 'movement of representation away from the body' (69-70). The midwife Jane Sharp later innovatively combined resistance to language's phallic associations with an insistence on the physiological origins of textuality, as Caroline Bicks comments, through her assertion of the resemblance between a woman's orifice and a Greek letter Theta, as if it were based on it, and so reversing the authority of words over things, and men over women's bodies (Bicks 21).

Carpenter in "My Lady Tongue" traces a privileging of speech back to the medieval memory artist, Ramon Lull, who saw speech as crucial, because it shared concepts between faculties, such as the imagination and memory, and between humans (5). This concept of fracturing and interconnecting both within and between subjects, demonstrates a fluidity of boundaries both intrasubjectively and intersubjectively, that is comparable to extended mind conceptions of subjectivity. Speech as a god-given social tool operative within the world of the subject is asserted by *Lingua* to the queen Psyche:

Her Citties would dissolue, traffique would decay, friendshippes be broken, were not my speech the knot, *Mercury*, and *Mastique*, to binde, defende, and glewe them together (sig. F3r)

In the sixteenth century ambivalence towards language is described by Carpenter as being fuelled by humanists' assertion of the primacy of the spoken word in daily life combined with a continuing focus on language's limits. In *Lingua* there is tellingly no resolution offered to traditional debates, as it plays with 'the conflicting notions of language that it tosses about for the pleasure of its audience' (Carpenter 12).

Furthermore, *Lingua* theatricalises Clark's later proposal that language is akin to the human race having learned a new perceptual modality, since the central conceit of the play is speech demanding recognition as one of the five, or rather six, senses. That speech could be considered equivalent to a sixth sense, indicates early modern realisation of the profound extent to which language is fundamentally part of the human make up. Albeit that *Lingua* is awarded recognition only as a feminine sense, as Common Sense announces:

...all women for your sake shall have six *Senses*, that is seeing, hearing, tasting, smelling, touching, and the last and feminine sense, the sense of speaking. (sig. I4r)

Whether it is as a corrective supplement to the other senses, or else of speech as continuing or exacerbating the other senses' flaws, there is a complex awareness of the fundamental humanness of language in both its lacks and in its formativity. In a more wary way than in extended mind ideas then, spoken language is depicted here as an extension of human cognition and subjectivity.

Early modern ambivalence about language was symptomatic of ambivalence about human nature, with the projection of anxieties, as well as praise, onto humans' most fundamental mind tool. Language was understood as occurring within an embodied being, and in some accounts it appears dominated by this embodiment. Yet interest in gesture as a communicative medium asserts its embodied nature as proof of its unaffected sincerity. Meanwhile rhetorical works argue that language both supplements and complements biological capacities and thereby dramatically forms human nature. Finally, the play *Lingua* encapsulates the early modern understanding of language, incorporating both prefigurings of psychoanalytical concerns, as well as EM notions of language as a new perceptual modality.

Character and Conception forms

Nature hath given us certain Elements, and all Bodies are compos'd of them; and Art hath given us a certain Alphabet of Letters, and all words are composed of them (Donne, *Sermons* 9: 173)

In Donne's sermon a parallel is drawn between nature's composition of man from the elements and man's artful composition of words from letters. This section explores the use of perceptions of language to construct representations of the human subject and mind, and vice versa. Gallagher and Greenblatt explain that the 'linguistic turn in the social sciences and humanistic disciplines' has heightened the appeal of 'conceiving of cultures as texts' (8). This linguistic turn also contributed to the postmodern concepts of the self as a text; Dennett comments on his surprise at discovering that his idea of 'the self' as a construct of narrative already existed in deconstructionist accounts of literary theory (*Consciousness* 410-11). As discussed earlier Dennett and Clark, and Lacan and Butler, all in various ways describe the narrative construction of 'the self'. Unlike the psychoanalytic accounts, but similar to Clark, early modern notions draw on a system in which literary constructs of people are often viewed as a continuation of, as well as a disjunction to, their physiological materiality. This section will explore a few early modern instances of the paradigms of the self and of the mind as text, focusing first of all on the genre of Character Writings, then considering the collaborative nature of the conception and delivery of plays, and finally exploring a wider range of literary textual evidence, which express the idea of self and of the mind as texts.

Character Writings were fashionable and witty collections of short essays on places, people and trades. They were purportedly intended to reform character by the study of examples, often of superlative ideal or admonitory characters, in an ethical tradition that links back to the Greek philosopher Theophrastus' *Characters*. Character writings of types of people tend to be generalised depictions, stereotypes that nevertheless would have affected how people perceived and imagined others and themselves. These writings participate in the concept of people as having been imprinted with a character and therefore tend to explicitly applaud inwardness and a disengaged model of subjectivity:

He is a Happy Man that hath learned to read himself, more than all books, and hath so taken out this lesson that he can never forget it; that knows the world and cares not for it. (Hall, *Characters* 119)

In this self-reflexive construction, the happy man is divided into two positions, a book and a reader of it. Although the world is to be dismissed it must also be known. A feminine example praised for inwardness by Thomas Overbury, describes 'A Good Woman' as: 'She is much within, and frames outward things to her mind, not her mind to them' (32). Again tacitly acknowledged is the importance of the external, as

well as its potential to structure our minds. Striving to be independent from the world is in part a symptom of the extent to which it was understood to affect character; the fundamental role of the humours, passions, spirits, elements and souls in forming the disposition necessarily destabilize the line wishfully drawn between inward and outwardness.

Overbury in his collection, *Characters*, defines 'character' as being of an 'infinitive mood', suggesting it is a primary form that can be declined. He states that a character is like a letter (as A, B) that leaves a strong seal on our memories and that it is 'to engrave'. It is also described as signifying an Egyptian hieroglyph, as it is an emblem containing much in little; a variously coloured picture heightened by one shadowing; and a musical close of many strings (94). Overbury's examples of what a character is suggest that humans have an underlying disposition that can be variously expressed according to other factors. This was not incompatible with humoral views since the humours were thought not only to affect the character through later external influences, but to have already contributed to dispositional formation through the character's sex, parents, and native land. Therefore, the idea that a subject is in some way predisposed or has a particular tendency of character, does not contradict early modern notions of the subject as humoral, plastic and extended. Character traits are also variously associated with external factors, such as appearance, behaviour, place, occupation, or habit. So, for example, a tinker's character is described as being formed by his constant travels: 'A Tinker is a movable, for he hath no abiding place; by his motion he gathers heat, thence his choleric nature' (54).

There are many early modern examples of the phenomenon of book-people. John Earle's shopkeeper in *Microcosmography* gives away his unwanted words with his unneeded wares and is the abstract personification of his shop: 'His shop is his well stufte book, and himself the title-page of it, or index' (182). This suggests continuity between what he does and what he is. In Johnson's *Cynthia's Revels*, the patched-up Amorphus is another transparent self-publicist:

He that is with him, is AMORPHVS, a trauailer, one so made out of the mixture and shreds of formes, that himselfe is truly deform'd... hee is the very mint of complement, all his behaiours are printed, his face is another volume of *essayes*... (2.3.85-90)

This description is echoed in Joseph Hall's description 'Of the Vainglorious' in his *Characters of Virtues and Vices*:

All his humour rises up into the froth of ostentation, which if it once settle fall down into a narrow room. If the excess be in the understanding part, all his wit is in print;

the press hath left his head empty, yea, not only what he had, but what he could borrow without leave. (134)

These examples demonstrate a distrust of the kind of assertive bombast and demonstrativeness that are sometimes seen to be encouraged by twentieth and twenty-first century western individualism. Although both 'good' and 'bad' types of people are described as being characters and as being like letters that can be read by themselves, the easy-to-read and overtly expressive are described as vacuous and loud-mouthed.

A wider conception of humans as literary creations underlies this whole genre. Apart from demonstrating wariness about display in people's behaviour and in the appropriating of others' ideas, the use of this comparison of humans with books locks into an equal wariness about self-display in print and of writers' borrowing of ideas. A critic 'converses much in fragments', his phrases are 'a miscellany of old words', and he 'makes books sell dearer, whilst he swells them into folios with his comments' (Earle 184-85). Urbanisation, social mobility and courtlife resulted in subjects being propelled into new situations with different rankings, with theatrical witticisms a means of making an impression in the competitive world of the upper-classes; accordingly Thomas Dekker sardonically advises the intellectually vacant new courtier when at the playhouse to 'hoord vp the finest play-scraps you can get, vppon which your leane wit may most sauourly féede for want of other stuffe' (*Guls* 30). The early modern cosmological system tends to make use of functional analogies, and Dekker draws on the parallels between physical and cognitive incorporation. Dekker invokes other figures, such as Bacchus: 'Fatten thou my braines that I may féede others' and his reader is advised to 'haue most deuouring stomaches' and need only 'boyle my Instructions in his brainepan' (*Guls* 4, 3-4). Linguistic borrowing and rhetorical imitation formed a topic of playful debate in early modern discourses: with those who were supportive of its prosthetic benefits countered by a mocking of the artifice of literary borrowers. Donald Lupton, although an attender of plays for pleasure (83), comments that early modern playwrights habitually borrow plots, characters and rhetorical styles from the ancients or contemporaries, and accuses them of vain and cunning deceitfulness: 'They are as crafty with an old play, as Bauds with olde faces; the one puts on a new fresh colour, the other a new face and Name' (79-80). This depiction of a play personified, also again demonstrates the perceived humanness of language or of texts.

The fluidity around issues of authorship relate to the traditionally less textually fixed genre of playwriting. Shakespeare (and his co-authors) are shown, in particular

by Geoffrey Bullough's three volumes on the multiple diverse sources drawn on in Shakespeare's works, to have participated in the considerable creativity involved in this practice of borrowing and imitating. Jeffrey Masten has written of the numerous types of collaboration involved in Renaissance theatrical production: over half of the plays produced included the writing of more than one man; there were frequent revisions of play texts over time; and as working documents they underwent revision, cutting, rearranging and augmenting by book-holders, copyists, and other writers, were elaborated and improvised by actors, and music and songs were often latterly attached (14). Masten also adds to this the capitalist collaboration of shareholders in the enterprise, and the participation of the paying and applauding audience to which Renaissance dramatic texts often appeal: 'Do but you hold out/ Your helping hands' (14-15; *TNK* 'Prologue' 25-26). Plays are 'a communication between actors and audience' Masten suggests (16); indeed, these flattering appeals to the audience imply a form of distributed creativity as bringing the play into being. Furthermore, *Henry V* famously calls on the need that the audience apply their minds to that set before them if the play is to succeed: 'Piece out our imperfections with your thoughts...For 'tis your thoughts that now must deck our kings' (1.1.23, 1.1.28). Plays stage an early modern understanding of various forms of the extended mind and subject in their very creation, production and performance.

Yet, the collaborative norm did not mean that there was not the possibility of a writer being accused of being an intellectual thief: Shakespeare was famously accused by Robert Greene of being 'an vpstart Crow, beautified with our feathers' (sig. F1v). 'Plagiarism', only appears in lexicographical books from the 1650s on, but again reflects a transferability between concepts used for people and for texts, as it is defined by Edward Phillips as 'he that steals people out of one Countrey, and sells them into another; also a stealer of other mens works, or writings'. Diachronic forms of collaborative thinking occur over century long time spans, and the Renaissance is renowned for the birth of new ideas that arose from attempts to syncretise Christian, Islamic, Jewish, medieval, and classical texts. Joseph Hall in the 'Premonition' of his *Characters of Vices and Virtues* presents the argument for using the scaffolding of antiquity, both to build on their subject matter and for old styles to be wrought anew (103-4). This access to collective wisdom is listed by Clark, as one of the fundamental ways in which language has a fundamental effect on human consciousness; every generation is indebted to and shaped by the inheritance of complex structures of knowledge ('Magic' 171-2).

The notion of book-people was also connected with the close relationship in early modern thinking between being physically and mentally 'pregnant' or

'conceiving' and then producing biological or cognitive offspring. In *Troilus and Cressida* Ulysses appeals to Nestor: 'I have a young/ Conception in my brain; be you my time/ To bring it to some shape' (*Tro.* 1.3.307-309). The idea of bringing the conception 'to some shape' echoes early modern language used to describe the transition of the foetus from matter to form, which Gowing describes as occurring around the first trimester stage when the child became 'quick' (121). It also suggests a notion of intersubjective cognitive intercourse as operative in producing thoughts. A later example in the play presents the quasi-independent status and potential unruliness of the cognitive offspring: 'My thoughts were like unbridled children, grown/ Too headstrong for their mother' (3.2.111-2). Gordon Williams' glossary of sexual terms notes a number of ambiguous examples of 'conception' and 'conceive' whilst Maus spends a chapter discussing numerous types of comparisons between women's bodies and the creative imagination (78; 182-209). That the mind may be impregnated like a mother's womb was physiologically naturalized by accounts reporting the similarity between the matter protecting the womb and the brain. In Joannes de Vigo's 1543 medical dictionary the 'Pericranium' is described 'lyke the skynne wherwith a chylde is wrapped, in the moothers woumbe'. Yet, the conceit could also work the other way: a popular jest book describes the tale of a woman who has failed to conceive. At first unable to say the reason out of modesty she attempts to write it down, but it is observed she is unable to do so because there is 'no Ink in her Pen', to which she responds they have found out the reason without her needing to write it; hence, the cause is her impotent husband figured by the inkless pen (J.S. 69-70). Thus, the figuring of brain as womb and of producing thoughts or writing as cognitively equivalent to producing a child infiltrated diverse spheres' modes of understanding these activities.

A related conceit employed in authorial prefaces, letters, or other references to works was to describe the text in terms of a physical conception and child. Echoing the earlier discussion here on collaboration, Beaumont in a 'Dedicatory Epistle' to *The Knight of the Burning Pestle* stretches the conceit to include both his own role and the theatrical production of his work. He describes the 'unfortunate child' as being too hastily 'begot and born' by the company, resulting in its initial rejection by the audience, despite its mark of irony 'which showed it was no offspring of any vulgar brain' (51). Montaigne in his essay 'Of the affection of fathers' refers to both books and children as 'our other self' and regards the mental offspring as superior: 'For what we engender by the soul, the children of our mind, of our heart and ability are produced by a nobler part than the body and are more our own' (353).

In a later essay, Montaigne not only suggests that the books he produces are an extension of himself and an extension of his mind; there is a two-way movement, back and forth, between that construction of the book by him and his construction by the book:

In modelling this figure upon myself, I have had to fashion and compose myself so often to bring myself out that the model itself has to some extent grown firm and taken shape...I have no more made my book than my book has made me – a book consubstantial with its author, concerned with my own self, an integral part of my life... ('Of Giving' 612)

Donne employs a slightly less explicit two-way production occurring between the author and his book in his dedicatory epistle to *Devotions*. He describes himself as having had three births: his natural birth into the world, his supernatural birth into the ministry, and finally his preternatural birth in recovering from sickness and re-entering this life. This last birth he describes as also having made him a father as from it his book is produced at the same time as it produces him: '*In this last Birth, I my selfe am borne a Father: This Child of mine, this Booke, comes into the world, from mee, and with mee*' (3). Thus, in both these examples from Montaigne and Donne, the mind through being objectified for itself on the written page produces the subject which in turn produces the book; demonstrating that through the use of objects as part of our mind we not only may extend our mind onto the space of the page, but also extend the capacity of our mind to build thoughts upon thoughts that lead to the higher reasoning faculties, which in turn improves the book, and so on and on in spiralling developmental cycles through the aid of these cognitive artefacts. That the mind or subject may be encapsulated by a textual distillation and further that this distillation of the mind will in turn teach the mind that created it, creates a circularity of created and creation between the object and the subject which places their duality in question, as it is suggested that objects create subjects as much as they are created. To replay the opening quote from Clark: '... this intellectual product owes a lot to those repeated loops out into the environment' (*Mindware* 142).

Following Clanchy and forefiguring Clark, the social anthropologist, Jack Goody in the late 1980s described how: 'When a map or book intervene between the object and subject, we are dealing with 'mind' out there as well as with mind inside' (255). The early modern period shows clear evidence of participating in the notion of the subject and the mind as extendable beyond the head and body boundaries. This concept included not only the fashioning of the subject or the mind through interaction with one's own text; a text was also valued for its potential ability to

generate mental offspring through others, as implied by Beaumont. Ficino beautifully describes this collaborative cognition in the introduction to his own work on the nature of the mind:

...by means of mind, we shall ourselves have the power of creating mind...I may perhaps have created, in a night's work, a mind of this kind, by means of mind; and this mind I would now introduce among you in order that you yourselves...may at some time bring forth an offspring... (194)

Mind produces mind in succession; whilst this appears more a case of the reproducing rather the extended mind, it needs to be considered in light of early modern views of reproduction as an extension of the individual (itself a reflection of the perpetuity of the soul) as Crooke says: 'For so euery indiuiduum extending it selfe as it were, in the procreation of another like vnto it selfe' (200). Again the reciprocal flows between individual and social, and between textual and biological cognitive artefacts are celebrated. The fertile and multiply realizable early modern extended mind operates over biological, individual, social and textual domains.

The character writings discussed suggested the types of comparisons made in representations of book-people from which emerge a number of themes connected with early modern textuality's relation to subjectivity and cognition. The idea of book-people or 'characters' play on the extent to which the printed word is involved in our make up. The borrowed or outlandish wisdom of many of those described as book-like, represents wariness about self-display and loquacity, and this reflects a more general wariness about human literary collaboration and publication. Nevertheless this is also connected with more positive notions of textual and theatrical production as fertile extensions of the human mind and subject.

Conclusions

This chapter has argued that diverse views existed of the potential relation of gestural, spoken, written and printed language to human cognition and subjectivity. Positive, negative and ambivalent beliefs about language as a special human cognitive tool circulated through the period. These beliefs were concerned with how forms of language shape knowledge of oneself and the world, and enable communication within and without the subject. The particular mix of mnemonic and linguistic technologies available in the early modern period, reflect and assist in understanding the particular beliefs circulating at that time, whilst over a wider chronological panorama there is evidence that ambivalences about language reflect

longer term structures that relate to our experience and our interpretations of being human. Twenty-first century anxieties about memory and language are evident in (and long before) the early modern period.

Applying EM to early modern practices can open up a new understanding of them: certain theories of language in the early modern period emphasise that whilst language can operate through various different, and more or less natural mediums, it is necessary for human subjectivity; yet simultaneously circulating is the notion that forms of language function like, and therefore should be treated as, cognitive processes. Memory theatres are included in this first type and suggest early modern recognition of the importance of distinctions between mind tools, whilst discussions of the relative benefits of cognitive resources often place importance not so much on the particular forms as on the functional advantages. The overall implication is that there exist long-standing continuities in terms of the use of cognitive tools, although perceptions of cognition and subjectivity can also be related to particular sociocultural environments and the available cognitive tools, such as gestural, pictorial, spoken, written, printed or digital languages, or the particular mix of these media, which are operative in them. Moreover, concepts of the text as in itself mind and as creative of the mind and the subject make clear the resonance of EM with early modern beliefs; the use of language involves a two-way relationship between the shaper of words and the words' shaping of the shaper. The extension of the mind through language is an easier imaginative leap for the early modern thinker used to notions of parallels between biological and mental conception and offspring, and the eternity of the soul reflected in the perpetual shape-shifting of material forms, than it has perhaps become for us today.

Early Modern Intrasubjectivity and Intersubjectivity

This chapter begins by exploring the notion that a subject was composed of multiple agencies, and the consequent uncanniness of the self as well as the world. This is followed by an exploration of various forms of sharing of agency or identity between multiple subjects, through love, friendship, service and nationhood. There is evident both the need of and a tension about the extent to which our cognitive processes involve other subjects, just as there is a tension about the extent to which multiple agents operate internally in our cognitive processes. Writers suggest the delicate balance that is required between internal self-reflection and external social interaction. The next brief section discusses various modern critical models of early modern subjectivity, in order to consider their relation to the position taken in this thesis, and to succinctly evoke an image of the early modern subject which appears through this perspective. In the following section there is discussion of a number of issues concerning the early modern subject, including: the practice of inferring mental states from behaviour, body and clothes; theatre's arousing fascination with and anxieties about the composite nature of the subject; the diversity of perception and phenomenological experience; and phenomenological experience as occurring in a multiple and extended subject. Finally the last section considers the nature of the mirror, as a technological instrument and literary conceit for exploring and explaining subjectivity and cognition. Mirroring by a tool or another subject became understood in terms of one another. Extended subjectivity and reflexivity, was part of a continuing literary tradition and of a human mode of operation, that the mirror was understood in relation to and that the mirror-motif was used to represent. The mirror crystallises many of the issues raised by these chapters through its relation to early modern models of perception, the mind and the subject.

One in Many and Many in One

...the whole human race can be compared to one whole single man. But in one human individual there are multiple and divers members' (Pomponazzi 351)

This section focuses on the proposal that a multiplicity of agents can be understood as operating within a single human being, and conversely that collectives of human beings can act as a single agent; these linked concepts have recently been proposed

by philosopher Carol Rovane (208). The metaphysical given of the separateness and singularity of a person has equally been questioned by Judith Butler as discussed in Chapter 2. This section aims to demonstrate a historical precedent, with evidence that these are ideas with which early modern discourses diversely experimented. With similar import to Pomponazzi in the opening quote Montaigne stated: 'Let the people be one to you, and let the one be a people to you' ('Of Solitude' 221). This indicates that helpful comparisons can be made both with Clark's concept of 'soft selves', the coalition of cognitive agents within, and with Kosslyn's 'social prosthetic systems', in which other people functions as an extension of individual cognitive processes and subjectivity.

In any consideration of the multiplicity and uncanniness of oneself, the essays of Montaigne are especially salient. In 'Of the inconsistency of our actions' Montaigne challenges the notion of the stable self:

I give my soul now one face, now another, according to which direction I turn it. If I speak of myself in different ways, that is because I look at myself in different ways...All contradictions may be found in me by some twist and in some fashion...and whoever studies himself really attentively finds in himself, yes, even in his judgement, this gyration and discord. (293-4)

As in extended mind theory our selves are constantly being modified by ongoing events and subjectivity is a polyphonic experience.

We are all patchwork, and so shapeless and diverse in composition that each bit, each moment, plays its own game. And there is as much difference between us and ourselves as between ourselves and others. (296)

Montaigne's human subject is multiply fractured with heterogenous agents operating according to their own direction, to the extent that different parts and different occasions of the self, are as strange to ourselves as to others. Similarly Donne in his 'First Meditation', describes man as 'Variable, and therefore miserable' since we can not even tell whether we are ill as 'one hand asks the other by the pulse, and our eye asks our own urine, how we do' (*Devotions* 7). This problem of divided cognition of the self is still under discussion, as Nagel evidences in 'Subjective and Objective' where he similarly describes how the examining part may itself come under examination and be found uncertainly reliable:

He examines himself and his interaction with the world, using a specially selected part of himself for the purpose. That part may subsequently be scrutinized in turn, and

there may be no end to the process. But obviously the selection of trustworthy subparts presents a problem. (208)

Nagel also comments that the fragmentation and variability of the self could lead to becoming 'less certain that there is anything very important that we are one of' (164). Similarly the flux of feelings that man is subject to leads Montaigne to remark that 'we are wrong to try to compose a continuous body out of all this succession of feelings' ('Of Cato' 211).

The idea of multiplicity and quasi-autonomous agencies leads to concerns over human vulnerability to external and internal triggers:

We do not go; we are carried away, like floating objects, now gently, now violently, according as the water is angry or calm...Every day a new fancy, and our humours shift with the shifts in the weather... ('Of the Inconsistency' 291)

This idea of humans as like flotsam and jetsam results in anxiety about human free will. Literary texts explore such anxiety by highlighting tensions between inward agency and intentions and outward actions and roles. In Webster's *Duchess of Malfi*, for example, the Duchess laments that the world is a 'tedious theatre' for she must 'play a part in't 'gainst my will' (4.1.83-84). Later Bosola, caught in a cycle of accident, laments: 'We are merely the stars' tennis-balls, struck and bandied/ Which way please them' (5.4.53-54). External influences such as the stars' effect on the humours of the body and the elements of the world troublingly placed in question human autonomy. Both within and without there are circumstances and processes that shape the subject.

The multiplicity that operates intrasubjectively in a subject also leads to an opacity and uncanniness of the subject to itself. A profound awareness of this enduring structure, which is fundamentally entwined with our experience of being human, is evident in the early modern period. Implicitly in opposition to such a view, Kirsten Poole argues that Freud's notion of the uncanny does not hold true for the early modern period. Poole argues that whilst from the nineteenth century on there was a friction between the shape-shifting psyche and a modern world in which time, space and matter were fixed by physics, instead, the humoral body found a parallel in a 'mutable, fungible, porous' world shared with demonic agents:

Putting the humoral body in this demonic world, by contrast, we might perceive a lack of friction as the logic of the humoral is strikingly akin to the logic of the demonic. The demonic world can be perceived as the fluidity of the humoral world writ large. (99)

However, although the world and the body were understood, as Poole suggests, as analogous structures, instead it can be argued that since the subject and the world were both shape-shifters, it resulted in an expanding of the realm of the uncanny, rather than a disappearance of it.

In the early modern period, uncanniness was acknowledged as operative both within and without the subject. An example is found in John Webster's *The White Devil*, in the scene in which Francisco, steeling himself to revenge the murder of his sister Isabella, conjures her picture in his mind. A stage direction requires Isabella's ghost to enter, although Francisco believes the figure that he sees is caused by the strength of his imagination:

Thought, as a subtle juggler, makes us deem
Things supernatural, which have cause
Common as sickness. 'Tis my melancholy. (4.1.107-9)

Whilst Francisco decides that the vision is produced by his melancholic humour, the appearance of Isabella's visible figure on stage creates uncertainty over whether it is in fact supernatural. The ultimate effect is doubly uncanny, due to the uncertainty as to whether the vision is produced by an outer or inner source. Both the world and oneself were familiar and strange.

Early modern interconnections with other subjects were also understood in relation to the humourality of the mind and body. Montaigne offers the injunction both to turn outward: 'the soul, once stirred and set in motion, is lost in itself unless we give it something to grasp; and we must always give it an object to aim at and act on', and to turn inward: 'We have a soul which can be turned upon itself and keep itself company, it has the means to attack and to defend, to receive and give ('How the Soul' 16; 'Of Solitude' 215). Yet, the reason for the latter need for introspection is because of our fundamental intersubjectivity: 'Among our customary actions there is not one in a thousand that concerns ourselves' (215). Montaigne believed that people, like the soul and body, were only separated by a 'narrow seam', so that one person's imagination could therefore act on another person ('Of the Power' 90). Belief in 'affective contagion' is compared by Rowe with current terms such as mass hysteria, and buzz, or word of mouth, but she concludes it was then a more enveloping feature of everyday life (176). Such pervasiveness was a cause of concern, and as we have seen creates an anxiety about the lack of agency that is implied: 'Our mind moves only on faith, being bound and constrained by the whim of others' fancies' (Montaigne 'Of the Education' 134). Modern challenges to proprietary

models are echoed by Katharine Rowe, who in reference to early modern subjects claims: 'A humoral inner life poses serious challenges to proprietary models of cognition' (180). This challenge to proprietary models came not just from internal multiplicity, but also from the permeability of the subject to the world and other subjects.

As in Stephen Kosslyn's theory, discussed in Chapter 1, other people's minds can also positively act as cognitive aids and as part of the cognitive process. Montaigne speaks of the way in which company can draw more from him than he can find in himself alone, and that sometimes when he has lost the point of what he was saying, that a stranger may discover it before he could; his mind is potentially more transparent to another than himself ('Of Prompt' 31-2). Beliefs about other subjects functioning as cognitive aids are part of a wider view of the world as a cognitive tool and a means of extended subjectivity. Montaigne explains: 'This great world...is the mirror in which we must look at to recognize ourselves from the proper angle. In short I want it to be the book of my student' ('Of the Education' 141). Montaigne's models of extended reflexivity appeal not only to the system of cosmological analogies between microcosm and macrocosm, but also to collective notions of subjectivity.

The individual was defined as a member of overlapping collectives: Latin Christendom, the Body of the Church, as well as human society. Stubbes in his faux-Platonic dialogue, *The Anatomie of Abuses* (1583), observes that: 'common reason aduertiseth vs, that wee are not borne for our selues onelie...Our Countrey challengeth a part of our byrth, our brethren and frendes require an other parte, and our parentes ...doe vendicate a third parte' (sig. B4r-v). Donne (famously) set out his belief in the collective and interdependent nature of humanity in his 'Seventeenth Meditation': 'All *mankinde* is of one *Author*, and is one *volume*...No Man is an *Iland*, intire of it selfe; every man is a peece of the *Continent*, a part of the maine' (*Devotions* 86-7). In the works of Bacon, the injunction of the Delphic Oracle to 'know thyself' ('nosce teipsum') Kiernan notes was a colloquial rebuke, 'A Nosce Teipsum', was 'a chiding' or a 'disgrace' (290). This example of how socialised and externalised self-knowledge was suggests common acceptance (not necessarily consciously) of the concept of extended reflexivity. Through concepts of the world as subject and inversely of the subject as world a profound sense of their interrelation arose, with subjectivity perceived as collectively operative, through an extended social prosthetic system, which the rest of this section considers in relation to love, family, friendship and nation.

Nowhere can the pleasure in social prosthetic systems be felt more strongly than in the realm of love: 'that falls like sleep on lovers and combines/ The soft, and sweetest minds/ In equal knots' (Jonson 'Epode' 50). Platonic and Ficinian beliefs led to the commonplace of love as involving the exchange of souls, with figurations of all types of love employing the idea of the beloved and the lover as becoming one individual: Donne describes his heterosexual match as 'we two being one' ('The Canonization' 24); Montaigne describes La Boétie as 'the one who is not another man: he is myself' ('Of Friendship' 172); Celia tells Rosalind 'thou and I am one' (*AYL* 1.3.91); in *Philaster*, the King calls his daughter 'you, my self' (3.2.38); and in Shakespeare's 'Sonnet 116' love is (famously) described as 'the marriage of true minds' (1). These descriptions suggest early modern people naturally conceived of subjectivity and the mind as socially extended and operative beyond head or skin boundaries.

Permeability between subjects is likened to that between body and mind, and the celebration of a unity between two people can be comparable to that between soul and body. Donne writes of how a unity between two disembodied souls is thwarted in 'The Ecstasy', while physical unity can free their imprisoned soul through the senses. He begins by imagining that he and his beloved have travelled out along their eye beams and become a new singular soul made up of atoms. Of bearing here is Screech's definition of ecstasy: 'In erotic mania souls are exchanged between the two lovers, who therefore live in a permanent state of ecstasy, permanently, that is, 'outside' themselves and 'in' the beloved' (29). But, Donne points out that this spiritual meeting has been enabled by their bodies bringing their souls together just as their souls must descend to the affections and faculties in order to be freed:

So must pure lovers' souls descend
T' affections, and to faculties,
Which sense may reach and apprehend,
Else a great prince in prison lies. (65-68)

Their love will be 'revealed' by this physical 'book', the body. He continues to conflate the spiritual and physical, mentioning in closing that the lovers' physical union will be little different to 'this dialogue of one' spoken by their joint soul (70, 72, 74). Here we find not only the conflation of two subjects in one, but as Colin Burrow describes, Donne's recurring theme of 'accommodations between the carnal and the intellectual', between the body and the soul and the interlinking spirits, which combine into 'That subtle knot, which makes us man' (5; 'The Ecstasy' 64).

Yet, this permeability, involving a dissolving into one that removed critical distance, could instead lead to a negative view of love, and it is described by Bacon as a 'Syren' and a 'Fury' that 'doth much mischiefe' ('Of Love,' *Essays* 39).

A lack of examination, or consciousness, of national customs or about habitual routines is also seen as problematic in a world of extended cognition and reflexivity. Montaigne describes how we imagine as morally right what are actually inherited notions, as we confuse local customs with the natural laws of conscience and reason ('Of Custom' 100). Whereas animals are guided by natural laws, human laws and customs are relative. Therefore Montaigne reminds the reader of the need to question national and personal prerogatives and assumptions, as well as our supposed superiority to animals and tribal societies ('Apology' 521-32). Wider travel and reading in the early modern period, as earlier quoted from Bacon, widened knowledge of historical and geographical variations, creating greater awareness that physical and mental dispositions were altered by diet, climate, company, habits, and customs. Bacon's warning against unexamined living is grave for the individual but graver for a social group: 'But if the force of *Custome* Simple and Separate, be Great; the Force of *Custome* Copulate, and Conioyned, & Collegiate, is far greater' ('Of Custome,' *Essays*, 165). This emphasis comes from an awareness of the extent to which cognition is constructed by embodiment, embeddedness and extendedness, which entails the realisation that the subject is constituted by and co-dependent on the other.

Social interchange was understood as necessary in order to exist as human subject, with those who have an aversion towards society compared to a 'Savage Beast' ('Of Friendship,' *Essays* 107-118). Therefore, Bacon recommends a balanced division between self-love and society ('Of Wisedome,' *Essays* 97). Furthermore, human interdependence was understood as a psychological and physiological requirement, with friendship preventing the unhealthy blockage of the heart by allowing the discharge of emotions, via discourse for instance. In a sermon on the abuses of speech, *The Taming of the Tongue* (1619), Thomas Adams concedes 'Oh necessary tongue! How many hearts would have burst, if thou hadst not given them vent!' (145) Adams continues that the tongue enables discourse not only with other people, but also with God (146). Deborah Shuger comments that the classical tradition of moral character as expressed through rhetorical praxis, was supplemented by the use of religious discourse of the closet between the subject and God, the 'soliloquy' that enacts the voice of the soul (63-78); thus there were two ethical frames operative, with a religious form of subject extension supplementing the worldly one.

Social relations also drew on St. Paul's image of the body politic (1 Cor 12:20-21), as is evident in 'A Letter sent by the Maydens of London' (1567). Their joint letter responds to a pamphlet making aspersions that 'handmaydens and servants' have too much liberty. Their joint response calls on their mistresses to defend them and so secure their continued service, comparing their matrons and mistresses need of them to their need of the instruments of the body:

'For as there are divers and sundry membres in the body, the least whereof the body may not well want or spare...Even so are we to you (good Mistresses) such as stande you in more steade, than some of the membres stande the body in...' (Anon sig. A4r).

Thus, the servants compare themselves to body parts, in their claim to operate as vital supplementary extensions of other human subjects.

Overall, there was an awareness of, a pleasure in, and a tension about human interdependence. Social interaction was understood as vital as an emotional outlet, and for reasoning and self-knowledge, but with a balance necessary, other than in friendships and love, as solipsism or extroversion were both perceived as dangers. A pervasively familiar way of perceiving subjectivity in the early modern period, sees multiple subjects within and social prosthetic systems without; these were correlative to a general understanding of the interactive relation of mind and body, and of cognition and subjectivity as extended into the world (and beyond).

Composite Subjects

The evidence examined so far in these three chapters on the early modern subject has explored the humourally, spiritually and socially extended nature of the early modern mind and subject. This brief section discusses various critical models of the early modern subject, in order to consider their relation to the position taken in this thesis, basing the argument both on evidence explored in these chapters, and looking ahead to the Shakespearean material in the concluding chapters.

Current literary theory has noted that representations of the self from the Renaissance place in doubt the 'very possibility of a "self" in the paradigmatic Enlightenment sense – an autonomous individual testing rules imposed from without against a sensibility nourished from within' (Coleman 3). Instead, the idea of the self is 'articulated within a broader picture of social ties' (6). This social basis for secular notions of the self is also implied by Timothy J. Reiss' assertion that there was no secular tradition for the idea that a private self-reflexive subject could think, act and exist in isolation; Reiss emphasizes the role of Jesuits' educational institutions in

spreading this theological idea of the self (17). With reference to the *Oxford English Dictionary* Sawday points out the formative prefix 'self-' only appears around the mid-sixteenth century; he emphasises that instead of modern notions of possessive individualism the word 'self' at this time is negatively anchored in theological notions of the 'inability to govern the self' and 'the unregenerate individual, in thrall to the flesh' ('Self' 29-30, 30). These critical models of the self together build up a picture of a self split between social articulation and inwardness associated with the relation to God.

Donne confirms and adds another layer to this: he juxtaposes a negative worldly self with a reborn Christian self in his 'Second Prayer' as he thanks God who has 'clothd me with thy selfe, by stripping me of my selfe' (*Devotions* 13). This metaphor of a physical stripping and regeneration also suggests that the inwardness of the theological self was understood as corporeal. Maus proposes that the bodily interior shared in the mystery of inwardness due to the corporeal way in which inwardness was conceived (195). Spenser's portrayal of the allegorical journey of the knights into the 'House of Alma' is described by Sawday as a journey into the 'uncanny' of the pre-Cartesian body and mind; it is a journey through which the knights discover the 'other' that exists in the human subject's 'own deepest recesses' (*Body* 170). Montaigne similarly describes himself as containing 'a back shop' within which the soul can keep itself company ('Of Solitude' 214). Other buildings used as structures constitutive of human subjectivity, that have already been mentioned in this thesis included a prison, a house, a kingdom, and a world, which have been figured as peopled and are external spaces relocated within. These various models of the early modern self relate to a complex amalgam of scientific, social, theological, and literary concepts; this is compatible with this thesis' inclusive view that the early modern subject resists being distinguished from its biological, sociocultural, cosmological and theological matrix.

A different angle is suggested by Richard Hillman who protests that cultural materialist and new historicist critics posit a seventeenth century subject whose inwardness is imagined as 'a sort of sanctuary where the true subject enclosed within the prison of interiority, would find its salvation' (6). Instead of this 'mystery of interior presence' Hillman claims that there is evidence in this period of belief in a Lacanian 'unconscious without depth' so that in early modern plays 'the experience of self-absence amounts to the only essential subjectivity' (15). In my view, whilst self-absence is experienced by early modern subjects, with a sense of fissure and uncanniness that parallels psychoanalytical models, this is not 'the only essential subjectivity' and in fact even accounts for the mystery of interior presence. For it is a

self-absence created by a distance that is in fact underlaid by a relation: the distance, and the unique relation, between man and God, which was believed creative of the fractured composite nature of the human subject. Early modern inwardness involves a sense of presence, autonomy and the promise of salvation as well as a sense of self-absence, which are both accounted for by man's relation to God. Experience of self-absence could be alleviated by recognition of forms of human extendedness. Early modern models of the subject describe humans as potentially resurrected with minds' that will no longer be mortally cramped but freely intellectually extended, shining reflexively back at God. This sense of the subject is supplemented by, as well as contrasted with, models in which the mortal subject extends instead primarily through the body, the world and other subjects. This form of extension is itself mitigated by the fact that the body, the world and other subjects are all creations of God, as well as separated from him by their elemental mutability and the chasm-like gulf created by the Fall.

The reason for the experience of Lacanian self-absence which appears in certain characters in Shakespeare's plays can result from failure to recognise the composite nature of the subject in this life and a striving for autonomy. This striving for inward autonomy can be driven by a sense of lack in world(l)y forms of extendedness; as evident in *Richard II* and *Hamlet*, examples discussed in Chapter 7. It is experienced by an early modern subject who fails to accept his chameleon and composite nature and strives after a stable inwardness that in the early modern Christian schema is believed achievable, albeit only in death. Conversely, within Shakespeare's comedies, there are characters who accept as their 'self' their human multiplicity, provisionality, opacity, discontinuities and extendedness, while attempting to maintain an equilibrious disposition, but that do not restrict this self to only one fixed course, amidst the winds and tempests of existence that fundamentally affect their temperament, complexion and cognitive processes. They do not simply rely on either worldly or inner forms of extendedness, and therefore do not undergo this type of trauma. Benedict in *Much Ado About Nothing*, for example, happily admits his necessary inconsistency, changing in the same scene from a disparagement of those who once scorned love and now are in it to a living example of the same; as he later concludes: 'For man is a giddy thing and this is my conclusion.' (2.3; 5.4.104-5).

The early modern subject is thus a thing at once as familiar and strange to itself as the world of which it is part and which is part of it. As Montaigne stoically suggests: 'All in all, he is a man' ('Of the Inequality' 233); or as Hamlet even more emphatically puts it: 'A was a man, take him for all in all'; a human subject is a

protean composite of all in existence, a mean between the corporeal and incorporeal, and subject to the constant inconstancy of Fortune (1.2.187). Thus, Joseph Hall describes the character of a wise man as: 'His purposes are neither so variable as may argue inconstancy, nor obstinately unchangeable, but framed according to his after-wits, or the strength of new occasions' (106). The subject exists in real time and is dynamically interacting with the world in a two-way relationship. His purposes are shaped by the hindsight offered by previous experience and by current circumstance. It is not a static ideal model for it participates experientially in the variabilities of the world and of the subject: it is a subject in flux seeking a balance of inward and outward orientation in a world in flux.

'By Rivers Fountains'

Every man in this age has not a soul of crystal, for all men to read their actions through; men's heart and faces are so far asunder, that they hold no intelligence.
(1.1.247-50)

In *Philaster*, a play by Beaumont and Fletcher, a lord of the court discusses the extreme hypocrisy and veiling of inner feeling within the current times. Not only does one man not know what another truly thinks or feels, but a subject is also fractured, with the outer representation of the face ignorant of the inner feeling of the heart. In this next section, the discussion focuses on such concerns regarding the reading of minds. Despite the acknowledged unreliability of understanding individuals through external appearance, words, and behaviour, the stress on such interpretation was intensified by the heightened sense of potential disjunction between 'seeming' and 'being', contributed to by the civil, political and religious upheavals. This leads into a discussion of the way in which the theatre aroused and played on concerns about mind-reading and the multiple and mutable nature of the subject. This section concludes with an elaboration of early modern philosophical views of the issues: Raleigh and Montaigne discuss the diversity of and limitations on perceptions, phenomenological experience and heterophenomenological suppositions. Also apparent is the early modern notion of phenomenological experience as experienced by a multiple and mutable subject, rather than a fixed subject, which relates to de Sousa's viewpoint discussed in Chapter 1.

The fundamental categories of 'outside' versus 'inside' were in common use in the early modern period, primarily, as Maus has established, in reference to a much contested distinction between 'seeming' and 'being' (5). Despite the persistence of the mystery of humans to one another, Maus emphasises its particular pertinence in

the Renaissance due to the repeated religious upheavals, as well as the manner of court procedures, rhetorical anatomisation, wider print audiences, and the social urbanisation of court life (14-16). Patrick Coleman similarly describes changing relationships between the self and the community, as caused by the interrelated developments of: the spread of print culture; the need for independent premises by which to legitimise authority in the wake of the Reformation and various civil and confessional wars; and the development of civil society with new standards of 'politeness', disciplining behaviour and concealing private feelings (4-5). 'An Epitome of Good Manners', which forms the last dozen pages of T.G.'s *The Rich Cabinet* advises that 'to frame our selues conformable to societie, wee must liue in such a fashion, that we may please others' (sig. Y7v). The very existence of such manuals listing etiquette and possible indiscretions reflect increasing self and social consciousness.

The sociocultural changes demanded not only that a wider span of the population develop the ability to infer what was going on in another's mind from external signals (especially what superiors or equals were thinking), but also that one develop a greater degree of self-control, self-consciousness and self-knowledge. City authorities took 'increasingly more powers to police the behaviour of their citizens', whilst 'new codes of civility and self-control induced individuals to police their own behaviour' (Milne 3). Character writings, popular courtesy pamphlets and advice books on manners, as well as books on rhetoric and the passions all attended to educating the early modern subject in the civil and social behaviour expected. The early modern focus on inferring what people were thinking involves phenomenological issues: the abiding problem of what can and cannot be known by a third-person mind about first-person experience and intentionality. Thomas Wright deploys an ecological comparison in advising the use of 'natural conjectures and probabilities' to fathom the causes of a fellow human's behaviour:

For that we cannot enter into a man's heart, and view the passions or inclinations which there reside and lie hidden, therefore, as Philosophers by effects find out causes, by properties essences, by rivers fountains, by boughs and flowers the core and roots, even so we must trace out passions and inclinations by some effects and external operations. (165)

This comparison of reading a man's disposition from external signs with how a philosopher might come to understand the hidden essences of the geographical world from their external properties, reflects the 'little world' topos, and an assumption that

these mystifying wonders are connected with and so deducible from visible externals; a method of interpretation described as not certainly reliable yet necessary.

Keen debates about inner and outer inform physiognomic reflection. In Castiglione's *The Book of the Courtier* the discussion of the relation of outer to inner is tellingly left unconcluded, although more biased towards their affinity since this is argued to follow the manner of God's work (330-331). Wilson in *The Arte of Rhetorique* appeals to the authority of Cicero, who called gesture the speech of the body which must agree to the mind as speech to the matter (116). Bacon suggests a physiognomical study that includes the reading of gestures and expressions to uncover dissimulation:

For the Lyneaments of the bodie doe disclose the disposition and inclination of the minde in generall; but the Motions of the countenance and parts, doe not only so, but do further disclose the present humour and state of the mind & will. (*Advancement* 94).

Expressions and gestures reveal the subject's current cognitive processes, and through them another's mind can potentially be read. The art of physiognomy is thus an inversion of the exposition of dreams:

The first is PHYSIOGNOMIE, which discovereth the disposition of the mind, by the Lyneaments of the bodie. The second is the EXPOSITION OF NATVRALL DREAMES, which discovereth the state of the bodie, by the imaginations of the minde. (94)

Intimacy of body and mind mean the body's revealed properties can be used to understand the mind and vice versa. Gestures are now understood to act as a 'material carrier' for the working out of ideas, and the early modern notion of reading another's mind through their gestures and physiognomy is linked to capacities now understood as enabled in part by mirror neurons. Recent work by Paul Ekman, who has developed practical methods for reading emotions in facial expressions, also follows up Bacon's interest in mind-reading via physiognomy.

Whilst Machiavelli had advised princes on how to gull their people in *The Black Prince*, on a far wider ranging scale we find descriptions of conmen taking advantage of the influx of gullible countryfolk to the anonymity of towns, and a growing number of poor and homeless (Kastan 115). Lupton tells of the acts of enclosure that contributed to the immense growth of London over a relatively short period, which he describes as a 'Country-mans Laborinth, he can find many things in it, but many times looseth himselfe' (4). Thomas Harman lists 23 main types of vagabonds and there is also considerable evidence from proclamations against rogues,

vagabonds, and masterless men that the numbers of poor had risen and that criminal activity against the naïve and unconnected was rife. Such deception worked in both directions: John Awdelay in *The Fraternity of Vacabonds*, describes one particularly wily type, ‘the courtesy man’, who by pretending to be a gentleman would flatter any well-dressed citizen he met on the streets and tell him a sorry tale, such as his coming from the wars, bereft of master or money, and then request charity from him (sigs. A3v-A4v). Not only in terms of the religious upheavals, and courtly manners, but also for everyday safety, the inferring of another’s mind had become an increasingly important ability in the early modern period.

Clothes, as an extension of the body, were like gestures understood as an important means of reading a man. Thus, clothes and the body or skin are frequently described in terms of equivalence. Crooke describes the skin as ‘an vnseamed garment couering the whole bodie’ (72). Erasmus in his influential book of manners for children *De Civilitate Morum Puerilium* describes that:

It is fully or suffciently sayd of the body, now of apparayle somewhat bycause apparayle is the forme and fassion of the bodye: And of this apparayle we maye coniecture the habyte and apparayle of the inwarde mynde (sig. B3r).

Davies in his ‘Humours’ versified this into advice:

The Habit sheweth how the heart is bent:
For, still the Heart the Habit doth prescribe:
And no externall signes can more bewray
The inwardest Affects then garments may. (Davies ‘Humours’ 2)

Stubbes spends a considerable part of *The Anatomie of Abuses* complaining against fashions that either reveal vice or conceal estate and condition. Stubbes pays a literal minded attention to every detail, such as the ‘monstrous dublettes’ that are a supposed sign of ‘gourmandice, gluttony and such like’ (sig. E2r). Ben Jonson satirises his contemporaries lust for clothes, as a displaced sexual fetish: ‘an officer there did make most solemn love,/ To every petticoat he brushed, and glove’ (‘XLII An Elegy’ 53-54). Clothes revealed the mind and were man-made replications of the body, both fashioning and being fashioned by the human subject wearing them.

David Scott Kastan argues that recent critical attention to the issues of gender crossdressing has obfuscated concern relating to transgressive class-crossdressing, evident in the numerous legal attempts to regulate dress in Tudor England (104). Theatre was understood as threatening because actors’ changing identity with a change of garments reveals ‘the arbitrary and artificial nature of social being’,

placing in question the traditional hierarchical culture of status (106). Moreover, Stallybrass and Jones have established the vital role of early modern clothing as social and physical shaper of subjects, constructing subjects through their external buttressing, reflected for example, in the way in which portraiture focuses not on portraying an inner self but on the material scaffolding such as props and clothing signifying status and gender (1-14). Gowing describes the ways in which clothes, then expensive items, were worn day in and day out and came to be seen as an extension of the body and of the subject:

Early modern bodies were mostly kept well clothed, covered in layers of inner and outer garments that were worn so long they were likely to become part of both the visible self, and inner subjectivity. (34)

In stories of sex and rape she argues that clothes stood in for 'a bodily boundary, as metaphor for the body itself, as a marker and evidence, and as a narrative focus' (106). Early modern views of clothes as subjective artefacts and conversely of the body as clothing, is echoed by the extended mind theory's view that objects may be experienced as body and the body may be experienced as objects or tools. Dennett describes clothes as 'part of the extended phenotype of *Homo Sapiens*' (*Consciousness* 416). Early modern subjectivity is conceived of not just in terms of a mind-body coupling, but as a mind-body-scaffolding coalition.

Not only in its use of costumes, but as a genre, theatre plays on the extended, transformative and multiple nature of human subjectivity. In this atmosphere of reform and uncertainty theatre aroused aggressive opposition, as it explored and played upon these very anxieties. Major disputes over the theatre were sparked when Stephen Gosson attacked it in *The Schoole of Abuse* (1579) leading to a number of pro- and anti-theatrical treatises in the following decades, although such accusations had already been heard from pulpits. In 1577 the preacher Thomas White had used a collapsing syllogism to assert that 'the cause of plagues is sinne, if you looke to it well: and the cause of sinne are playes: therefore the cause of plagues are playes' (47). By extension, theatrical players are often described as liminal and heteronomous creatures. Lupton describes how: 'A player often changes, now he acts a Monarch, tomorrow a Beggar: now a Souldier, next a Taylor...he seldome speaks his own minde, or in his own name' (Lupton 81). Besides, there was anxiety about players' mobile status in society as they moved between the lowest and highest spheres (Kastan 108-9). Stubbes conflates them with 'roagues and vacabounds' arguing that 'such as trauaile the Cuntries, with playes & enterludes, making an occupation of it...ought so to be punished' (sig. M1v; see also Lupton 81). On the

other hand, accusations that 'to let your boys wear the attire of virgins' was equivalent to the depravity of Sodom and Gomorrah, are ridiculed by Thomas Heywood in *An Apology for Actors* (1612). Heywood points out that as the scriptures are not always to be expounded to the letter, this being what has led to the 'Sacramentall Controuersie', so everyone knows players' intents are only of representation (sigs. C3r-v). Thus the issue of representation goes to the heart of the Protestant-Catholic dispute dominating the Reformation, concerning whether the transubstantiality of the Eucharist was literal or symbolic.

Yet both anti- and pro-theatricalists' claims rest on the ability of dramatic representation to carry out a moral coup in the heart and mind not only of the actor but also of the spectator. Heywood describes how theatre 'hath power to new mold the harts of the spectators and fashion them to the shape of any noble and notable attempt' (sig. B4r). Viewing theatrical spectacles is understood in terms of an emulATORY activity, which morally alters and cognitively shapes the spectator. Heywood emphasises the superior power of moving live theatre over static visual images or aural descriptions alone, as the tangible enactment of the theatrical spectacle creates a dynamic and transformative force that can 'make an Alexander' (sigs. B3v-B4r). Theatre dynamically enables access to an 'as if' world, revealing other subjects and minds.

This is a view also indirectly supported by the aggression theatre inspired. Humans' propensity to extend into bodies and into the world creates anxiety and this anxiety a desire to close the literal and figurative doors, to shut out epistemologically that which ontologically will remain an interdependent connaturality. Desire to protect the self through pre-emptive closure is evidenced in Gosson's advice to women at the end of his pamphlet: 'The best counsel that I can giue you, is to keepe home...Close vp your eyes, stoppe your eares, tye vp your tongues' (sigs. F4r-v). Sara Gorman suggests that gender or class crossdressing is part of a wider 'theatrical revelling in social anxiety' (291). The centrality of the transitional to early modern identity, Gorman argues is made evident in the fascination aroused by: pubescent boys playing women, the effects of dress; the series of transformations staged; the invisibility or liminality of certain types of identity, such as virginity (6, 20). Thus, early modern awareness and exploration of the human mind and subject's permeable mutability also emerges then in attitudes to theatrical spectacles.

Inferring another's mind could also be understood to involve attempting to occupy their phenomenological position, with the extent of accuracy in direct inversion to the extent of differences. In *Sceptick* Walter Raleigh begins by describing how animal perceptions must vary, and how therefore one species' minds

must be unknowable to another species, including humans, who do not necessarily have a greater insight, despite our higher placing on the epistemological ladder:

These great differences cannot but cause a divers and contrary temperament, and qualitie in those creatures, and consequently, a great diversity in their phantasie and conceit; so that they apprehend one and the same object, yet they must do it after a divers manner. (124)

After suggesting this plurality of phenomenological norms, with dogs for instance noted as having a greater sense of smell than humans, Raleigh then goes on to conjecture that due to the various shapes, temperatures, and dominant humours of humans there must therefore exist diversity in their perceptions and imaginations; consequently they 'may tell how these things seem to them good, or bad; but what they are in their own Nature they cannot tell' (135). Thus, whilst 'seeming' is discernible 'being' is not. This suggests a blurring between the characteristics of the subject and the object is inevitable, with a projection of one's own qualities onto the object, which results in an epistemological gap.

Bacon is also keen to point out the epistemological blurring between subjective faculties and objective qualities by the human mind, suggesting it creates a mirror-like distortion:

...just as an uneven mirror alters the rays of things from their proper shape and figure, so also the mind, when it is affected by things through the senses, does not faithfully preserve them, but inserts and mingles its own nature with the nature of things as it forms and devises its own notions. (Bacon, *New* 19)

The diversity of cognitive faculties is seen as creative of phenomenological diversity amongst humans. Maus similarly describes: 'each individual, necessarily limited to the evidence of his own senses, cannot know whether the perceptions of others correlate with his own' (7) Montaigne mockingly describes our reliance on referring all else to our own qualities due to lack of sufficient imagination: 'each relates the qualities of all other things to its own qualities. Which indeed we can extend or shorten, but that is all; for beyond that our imagination cannot go' (482). This is similar to Nagel's more recent suggestion that our understanding may be limited by our imagination since it is based on our experience (169).

Raleigh proposes that we may attempt to duplicate another's perception of something through, for example, the manual manipulation of the eye into a long slit, so as to gain an impression of how the world may look to a cat (125). But Nagel's later scepticism ridicules the idea that by strapping on a pair of wings he will know

what it is like for a bat to be a bat; he will only know what it is like for him to behave as a bat behaves (169). Underlying Raleigh's greater confidence in the possibility of imitated perception is perhaps a retained belief in shared humourality and a cosmological system composed of functional analogies. However, like Nagel, Montaigne cynically derides the possibility of man achieving an alternative perspective. Quoting Augustine, he ridicules humanity's pretensions,: 'In truth it is not God, whom they cannot conceive, conceiving themselves in his stead, not him but themselves whom they compare, not with him, but with themselves' (481). Humans' approximate conceptions relate to their own properties and essences rather than to any divine truth.

On the other hand, the potential for a vertiginous proliferation of different perceptions and experiences in the subject means that it occupies a multiplicity of positions, and implies that some of these may be closer to another than to oneself in a different state or according to a different cognitive faculty. Raleigh points out that variability of perception need not be between one creature and another, but may be between a man with a cold and the same man without it, since his sense of smell will vary accordingly (127) Raleigh continues that there are also discrepancies between information from different senses about an object, therefore conjecturing that objects may have other qualities that we are unable to discern, because we lack the instruments to do so (136, 138). We are not then the same in ourselves at all times, but changing from one moment to the next and from one perceptual faculty to another. This concern with the divisions and discrepancies in the subject is also apparent in Montaigne, who expresses doubts about variations between the cognitive faculties, and about first-person experience as well as third-person inferences:

They must not tell me: "It is true, for you see it and feel it so." They must tell me whether what I think I feel, I therefore actually do feel; and if I feel it, let them next tell me why I feel it, and how, and what I feel. (492)

Belief in the uniqueness of phenomenological experience does not necessitate a centralised monolithic subject, as has been shown in Roland de Sousa's work. In the case of Montaigne and the early modern subject generally, phenomenological experience does not only vary with conditions in the experiencing subject, but occurs in a multiple and mutable subject. Besides, the opinions of Raleigh, Montaigne and Bacon reflect the emergence of increasingly empirical minded scepticism in early modern thinking.

This section has explored the kinds of evidence on which mind-reading might be based, and the means by which it might occur or be hindered. Clothes like body

gestures and facial expressions were held as revealing the mind. As in current theories, although in terms of collective concepts rather than on a neuroscientific basis, the plasticity of the body image of the early modern subject enabled the body's supplementation, replication and transformation by non-biological resources, such as clothes. Humans' hybrid and composite nature was played on by the form and the matter of theatrical spectacles. The mutability and multiplicity of perception itself determined the relationship between the mind reading and the mind read. Consequently, questioning of the reliability of both first-person and third-person phenomenology was a particularly pertinent issue in Shakespearean England, and, as will be discussed in the following chapters, is a recurrent theme explored from numerous angles in Shakespeare's own works. The turbulent times, the acknowledged multiplicity and mutability of the subject, its opacity to itself as well as to others, all fuelled this interest. This lies behind the increasing fascination with mirrors and mirroring, and the role of reflection, both internal and external in understanding subjectivity.

Early Modern Mirrors

I dare speak it to myself, for it is not vainglory for a man and his glass to confer in his own chamber. (*Cym.* 4.1.5)

...it is our basic human nature to annex, exploit and incorporate nonbiological stuff deep into our mental profiles. (Clark, *Natural-Born* 198)

The physical properties of a mirror relate to the figurative properties of a metaphor, which is based on notions of transfer: an image of the beholder is transferred onto a reflection, which is at once analogous to and yet different from the observing self, playing with the co-existence of similitude and dissimilitude, and the mutual formation of each other by the original and the image. The complexity of the mirror as a literary motif arises from the obviously liminal space which it inhabits, being neither entirely subject nor entirely object: the mirror is potentially revelatory of the interior world of the self and yet conversely figures the objectified self within the external world, whilst exposing the negotiability and permeability of the boundary between them. For this reason, the physical properties of the mirror have led to its figurative employment to explicate the functioning of the human mind and the construction of subjectivity. The early modern period's interest in the relation of third-person reflections to those offered by the panoply of mirrors within the subject, and increasing belief in the partial nature of both types of reflection, also heightened

the contemporary interest in mirrors. This section considers the technological and literary forms of the mirror in the early modern period and begins exploring how these connect to theories of perception, cognition and subjectivity, leading in to the fuller consideration in Chapters 6 and 7 of how Shakespeare's use of the motif of the mirror illuminates aspects of early modern beliefs about embodiment, embeddedness and extendedness.

A boy in Tomkis' play *Lingua* sets the various cognitive faculty-characters a riddle:

That's nothing of it selfe, yet euery way,
As like a Man, as a thing, like may bee,
And yet so vnlike, as cleane contrary... (sig. G1v)

The answer is a woman, given her contrariness and that she is nothing of herself claims Phantastes, resonating the general misogynistic tone; but his page Heuresis corrects him with the answer 'tis a mans face in a looking Glasse' (sig. G2r). The 'biologically extraordinary' reflection of one's own face is revealed in a mirror, 'which though hidden from its owner it is open to public view, for the secrets of one's mind to be read by all and sundry' (Gregory 'Shaving' 95). In this way, mirrors heighten awareness of oneself as embodied object and gazing subject, with consequently more conscious interaction between subjects. The mirror enables a reflexive relation to subjectivity by means of a tool instead of through social mirroring or meditative reflection. Evident from the Biami Tribe's introduction to mirrors, is that they quickly become transparent in use, with the tribe quickly adapting to using mirrors as practical tools for the application of their own tribal make up instead of helping one another as before (Prendergrast 368-369). The collective and intercorporeal sense of the self arising from practical social mirroring is supplemented by the mirror, which allows an independent means of making-onese-up, through a cycle of preening and gazing at the mirror-image, which simultaneously enhances a concrete conception of oneself as a subject. Clark's description of artists' sketchbook-use is a helpful comparison for considering how the mirror creatively operates as a subject- and mind-tool: 'the iterated process of externalizing and re-perceiving turns out to be integral to the process' (*Natural-Born* 77).

Objects collate and prompt different experiences of moments in time, and therefore resist tendencies towards either localization or universalization, as Jonathan Gil Harris has argued (*Untimely Matter* 3-4). Mirrors nowadays though they come in all shapes and sizes tend to be of a fairly uniform quality and give a bright and clear

reflection; in the early modern period, however, the gradual spread of new types of mirror technology resulted in diverse forms and shapes of mirrors co-existing. From the mid-sixteenth century, Melchior-Bonnet describes that ‘mirrors could be had at any price and quality’ (23). Small convex mirrors, familiar to us from medieval and early modern art (such as Van Eyck’s *The Arnolfini Portrait* or Parmigianino’s *Self-Portrait*), were made of a thick glass with a greenish tint that had been blown into globes, lined with a heavy lead tain, and then subdivided. These were distorting on account of their shape, which compressed and reduced the reflection, and on account of the thickness and irregularities of the glass and the darkness and unevenness of the lead backing. Therefore even into the early seventeenth century some of the elite preferred to keep using metal speculums of gold, silver, steel or bronze, or less commonly mirrors of polished black obsidian or jet. During the sixteenth century flat clear shining glasses with lighter and brighter quicksilver and tin-tains were gradually becoming more available in England, though they were not produced there until after 1624. These new crystal mirrors were enabled by Flemish mirror makers’ development of a quicksilver and tin alloy, which was later combined with the Venetian glass industry’s ingenious production of a transparent flat clear thin glass, *cristallo*. These were to gradually revolutionise both the number of mirrors in circulation and the way that mirrors were used. (Melchior-Bonnet 9-69; Prendergrast 1-27; Kalas 519-42).

The new glass mirrors were very popular with the elite and were light enough that small mirrors were worn like jewellery, tied round the waist by women and worn by men in their hats. The puritanical Stubbes describes ‘Loking glasses’ as the ‘deuils spectacles to allure vs to pride, & consequently to distruction for euer’ and derides women who ‘must haue their looking glasses caryed with them whersoever they go’ (sig. G1v). Castiglione advises the courtier that he develop a ‘meticulous regard’ for his ‘personal appearance’, whilst satirising those who carry this to excess ‘carrying a mirror in the fold of one’s cap and a comb in one’s sleeve, and walking through the streets always followed by a page with a brush and sponge’ (68) In Jonson’s *Cynthia’s Revels* (1599) Amorphus, having warned that the face is an index of the mind, instructs his companion to ‘place your mirrour in your hat’, but to compose his face by him, juxtaposing the technological with the social means and making the former just decoration and the latter a practical tool (2.3.67-68). Yet the increasing urbanisation, social mobility, and centralised courtlife, which heightened concern over personal appearance, as Sabine Melchior-Bonnet notes, increased the practical use of mirrors, as tools equipped to combat this concern:

Situated at the crossroads of nature and culture, it educated the eye and assisted in relaying lessons in civility. From a glance in the mirror flowed not only a taste for ornament and an attention to social display and hierarchy, but also a new geography of the body, which made visible previously unfamiliar images (one's back and profile) and stirred up sensations of modesty and self-consciousness. (1)

Mirrorware was therefore becoming necessary as a practical tool as well as an aesthetic accessory, but potentially produced a circular dynamic in which these portable mirrors led to more frequent reappraisals and therefore more self-consciousness or vanity.

In *The Faerie Queene*, Spenser describes current courtesy as a forgery, fashioned to please passers-by, who 'see not perfect things but in a glas', applying St. Paul's notions of 'through a glass darkly' here to social purblindness. He then goes on to describe virtue's seat as 'deepe within the mynd' and 'not in outward shows, but inward thoughts defynd' (6.7.5), which seems to present the mind as only inward in contrast with the tenebrific social glass of outward courtesy. However, in the following stanzas, Spenser describes virtue as disseminated from Queen Elizabeth 'In whose pure minde, as in a mirrhour sheene/ It shoves, and with her brightness doth enflame / The eyes of all' (6.7.6). His own book and the court are imbued with virtue by extension from her, and with the courtesies she has engendered then returned as tribute to her by the ladies and gentlemen of her court (6.7.7). The social world is permeated by the mind and virtue of the queen. Earlier in the volume, Spenser conversely explores the inherent multiplicity of Queen Elizabeth, personifying her various qualities in the various characters and inviting her to view herself in them as in a mirror (3. Proem. 5). Thus exploration of the doubleness, or multiplicity, of a subject is also invited by the mirror, or a series of mirrors.

Mirrors were still relatively uncommon for ordinary people: those who were not part of the elite or of their entourage of servants, and who were not actors, artists or artisans seeking patronage at court. To this general lack of mirrors in ordinary homes Laura Gowing connects a more social and embedded subjectivity:

Seventeenth century bodies existed in a different conceptual world, where subjectivity was a more collective affair, a matter of belonging and embeddedness. After all, there were almost no mirrors in ordinary houses, and to study your reflection could suggest vanity and a sinful preoccupation with earthly things. (5)

Philippa Kelly has explored to what extent mirrors were available outside of urban and court circles by examining regional inventories: in one rural parish in the early seventeenth century she discovered that whilst only three of the wealthier members

of town had bequeathed mirrors, their value would not have set them above general affordability, and therefore she deduces that they were not seen as necessary (5). Kelly, like Melchior-Bonnet, suggests that the central role of the mirror was for the personal grooming of society life. Therefore, despite the ease with which mirrors can be assimilated by small communities, during the early modern period social mirroring would have continued to play a more dominant role in perceptions of mirrors as objects, due to their relative novelty and the partialness of more widespread mirror use.

Mirrors were just one type of glass product affected by the technological advances in the glassmaking industry, and these other products affected perceptions of mirrors. The development of the industry resulted in new or improved magnifying glasses, spectacles and glass windows, and it assisted in the development of telescopes and microscopes, along with the continuing production of hour glasses vials, and urinal glasses (Haden 788-90; Mason 208-9; Rundus 124-25). Forms of glass were thus associated with both spatial and temporal states and processes. Bacon includes the manufacture of glass as one of the protean manipulations of art that 'reveal the ultimate strivings and struggles of matter' and the way bodies 'shift into various other shapes' (Bacon *New* 227, 228). Perspective glasses and mirrors were used in art and various types of these 'perspectives' became newly fashionable as a form of visual entertainment, due to contemporary fascination with visual illusions and the nature of perception (Miller 56-57). Reginald Scot gives an inventory of the multiplicity of types of glasses around in the late sixteenth century:

But the wondrous devices, and miraculous sights, and conceits made and contained in glasse, doe far exceed all other; whereto the art perspective is very necessary. For it sheweth the illusions of them, whose experiments be seen in divers sorts of glasses; ...for you may have glasses so made, as what image or favour soever you print in your imagination, you shall thinke you see the same therein. Others are so framed, as therein one may see what others doe in places far distant...others, where one image shall seem to be one hundred...There be glasses also wherein one man may see another mans image, and not his own... (222-223)

Scot's comments indicate how mirrors were not only used for scientific observations but also for magic. Theodore Ziolkowski relates the mirror's association with magic to its inherent mysteriousness: it can see what's happening behind the viewer's back, it doubles everything, and it contains in itself an inverted world (162). Mirrors were also supposedly used to foretell the future; the scryer John Dee used an Aztec black obsidian stone mirror to contact divine spirits believing that the stone would provide the key to the underlying unity of the world:

...from things visible, to consider of things invisible: from things bodily, to conceive of things spirituall: from things transitory, and momentary, to mediate of things permanent: by things mortall (visible and invisible) to have some perseverance of immortality... (sig. K1r)

The visible, bodily, transitory and mortal were understood as a means of grasping the invisible, spiritual, permanent and immortal; concrete reflected abstract. Thus the development of different types of mirrors, the widespread distribution of glass products, and the beliefs circulating in the early modern period further added to the potential of the mirror to work as a fertile and polysemous literary motif.

Mirror images proliferated in literature from the sixteenth century. Herbert Grabes, who attempted to produce a 'historical metaphysics' for the period from the thirteenth to seventeenth century, demonstrates the centrality of the mirror-image in Medieval and Renaissance titles and texts (5). Vernacular and secular mirror-titles and motifs dominated in the sixteenth century, with an apex in literary mirror use between 1550 and 1650, with books, tracts and pamphlets widely using mirror-titles and the conceits of Elizabethan writers generating new forms of mirror metaphors (7-15). The use of mirror-titles for books reflects the fact that both mirrors and books provide forms of extended subjectivity and reflexivity, creating a space for reflections upon the images. Grabes relates contemporary use of the encyclopaedic mirror-title to the fact that until the seventeenth century mirrors were often convex: 'reflection and reduction, (re)presentation and compression formed here a double analogy between mirror and book' (43). The encapsulation of knowledge in a book particularly relates to the qualities of the convex glass, since like an eye it compresses that it reflects. Thus, both technological developments and sociocultural context fuelled the literary deployment of mirror-motifs.

The varying materials and qualities of different types of mirrors due to the technological shifts were used by some writers for literary effect. Rayna Kalas describes how Gascoigne in his verse satire *The Steele Glas*, along with various other writers, distinguished between the religious connotations of the earlier reflective tools which required effort to see clearly in (like St. Paul's dark glass), and the vanity of the fashionable new glass baubles. Therefore Kalas contends that the metaphor of the mirror is 'calibrated to material changes in the physical object' (536). Whilst this is true, it is worth remembering that although Gascoigne took this opportunity to divest negative connotations onto the new mirrors, and to productively create a contrast between the two types, nevertheless, both positive and negative connotations had long been associated with mirrors and mirroring in general. As Kalas herself

points out other writers instead adopted the new crystal glasses' brilliance and clarity to signify positive attributes, with Stephen Batman, for example, entitling his book of moral emblems *A Christall Glasse of Christian Reformation* (536).

In certain cases a moral distinction is made by Spenser in *The Faerie Queene* between those who vainly look and those who are glasses. Lucifera is described as having in her hand 'a mirrhour bright' in which she often viewed herself and 'in her selfe-lou'd semblance tooke delight' (1.4.10). Instead Una is a mirror of virtue in which 'God himselfe vewing that mirrhour rare,/ Stood long amazd', and similarly Fidelia has a 'Christall face' (with a pun on Christ-all) and Belphebe is a 'glorious mirrhour of celestiall grace' (1.6.15; 1.10.12; 2.3.25). There are two possible exceptions, since Britomart and Elizabeth I are both described as looking in glasses. Britomart looks in the 'round and hollow shaped' glass but since it is similar 'to the world it selfe', and magically reflects her future husband Arthegall, this does not entirely undermine Spenser's general moral distinction between looking and being a glass (3.2.19; 273). Through her 'mirror stage' Britomart literally takes on 'the armour of an alien identity', as Kathryn Schwarz points out in her Lacanian reading of Britomart's mirror (273). The invitation for Elizabeth I to view herself in a mirror by Spenser refers not to a literal glass, as she is invited to view herself in two of the characters of Spenser's book, as in a mirror, which personify Elizabeth's various virtuous characteristics.

The first appearance of the word 'mirror' is given by the *Oxford English Dictionary* as occurring in John of Garland's 'Dictionarius' (ca. 1225). In the early modern period 'mirror' seems to have been often linked to positive models of conduct, while 'glass' was associated with moral satires and political tracts (Grabes 8-11). Shakespeare, however, seems to use the terms interchangeably. Salisbury the 'mirror of all martial men' and Hippolyta the 'dear glass of ladies' are equally ideal models (*IH6* 1.6.52; *TNK* 1.1.90). Shakespeare seems, however, to favour 'glass', perhaps because of its richer ambiguities, as it could slip between meaning mirror, or any of other glass product, and between signifying opaque reflectiveness and transparent penetrability. This slippage made it particularly ripe for literary conceits playing on philosophical debates about the opacity or penetrability of oneself and other subjects. Both mirror and glass motifs easily blur the boundaries between literal and figurative uses: suggestive of this is the *Oxford English Dictionary's* entitling of their first section for the noun 'mirror': 'Literally (or with obvious metaphor)'. Notably, the *OED* dates the first verb form of 'to mirror' as 1820, when in fact in Shakespeare's *Troilus and Cressida* a passive verb form of mirror is used: 'For speculation turns not to itself/ Till it hath travelled and is mirrored there/ Where it

may see itself' (3.3.104-6). This suggests an addition is needed to this entry in the *OED*.

Mirrors were especially associated with visual perception in the early modern period. The eye was thought to function in two ways, both receiving and transmitting visual information. The lens was thought of as a glass-like screen and named 'Chrystalline' (Crooke 530; *H5* 2.4.45). In *Lingua Visus*, the sight, lyrically compares herself with the mirror, describing the eyes as her 'two mansion houses' where she sits guarding the entrance of the 'species of things corporeall' through her 'walls transparent of pure Christaline' which act as 'the soules mirrour and the bodies guide' (sig G2v). Donne in the 'The Canonization' captures the eyes ability to encompass a world:

Who did the whole world's soul extract, and drove
Into the glasses of your eyes
(So made such mirrors, and such spies,
That they did all to you epitomize)' (40-43).

Moreover, he evokes the poignant contemporary sense of the two-way nature of the eyes, at once transparent glass and reflective mirrors.

The eye-mirror-motif was also useful as an analogy for cognition because visual perception demonstrates the way in which an external material form can be translated into an internal immaterial image. This analogy was reinforced by depictions of being and knowing as forms of light. Bacon figured them as different forms of the same phenomenon: 'for the truth of being, and the truth of knowing are one, differing no more than the direct beame, and the beame reflected' (*Advancement* 26); similarly the self-knowledge advised by the Delphic oracle is described by Bacon in terms of a reflective beam: '*Radius Reflexus*, whereby Man beholdeth and contemplateth himselfe' (*Advancement* 93). Bacon uses the vision-mind analogy to stress that learned men need to be able to view things in detail as well as in general: 'he that cannot contract the sight of his minde, as well as disperse and dilate it, wanteth a great facultie' (*Advancement* 19). The concept of the 'mind's eye' was a commonplace, as was the comparison of a king to an 'eye' to convey his supposed omniscience (Graves 83-88). For example in *Hamlet*, the mention of the metonymy 'our eye' for the royal presence is soon followed by a reference to 'my mind's eye', correlating the political and physical body (1.2.116, 1.2.184). A more general linking of vision with subjectivity springs from a Derridean play on the difference between the written and spoken forms of language: 'Eye' sounds like 'I' (and also 'ay'). Shakespeare's verbal playfulness combined with his interest in subjectivity and its

relation to perception variously exploits such ambiguity in his works. Richard II, asked if he will resign the crown, equivocally and invertedly states: 'Ay, No. No, ay'; spoken aloud this can be heard as meaning: 'Yes, No. No, yes' or as 'I know no I', amongst other possibilities – only decided when he adds 'For I must nothing be' (4.1.191). These interlinking strands of the subject, the mirror and the visual and cognitive processes encourage early modern conceits' use of the term to knit together the pattern of the human being.

Religious and philosophical traditions use the mirror-motif to figure meditative contemplation: this powerfully participates in early modern perceptions of mirrors. The mirror has an introspective potential, which relates to the Augustinian or Socratic traditions of self-knowledge, wisdom and prudence; in negative guise it appears as our inheritance of fallen man's hubris or of Narcissus' self-love, vanity and pride (Grabes 153-160). Davies' *Nosce Teipsum*, exchanging the words 'mind' and 'soul' throughout as equivalents, is particularly motivated by introspective preoccupations. Rejecting the notion that the soul is dependent on material functions, Davies claims the soul 'by a Mirror true/ Of her owne forme may take perfect sight' through 'reflecting thought' (9). Her imaginative capabilities are described as autonomously capable of mental time travel, Pegasus-like flight and imaginative figuring of the world; yet ironically these extended emulatory circuits are described in terms of physical instruments, for example, 'sees without eyes' (13, 14). This claim to the independence of reflective thought Davies' approach to the question of the relation between immortal soul and mortal body. Sense, he argues, is 'but a power, which she [the soul] extends', and the senses, like glasses, do not know what they receive (19, 20). However, in describing visual perception, Crooke argues that although a glass also receives sensible forms without material substance, whilst the glass does not perceive, the eye does because of the soul in it (652-3, 657, 669). This suggests early modern variation on the question of whether visual perception occurs in the eye as well as the passive reception of images. Yet Davies also describes the eyes as 'Mirrors' which soul-like take the world into their embrace, and conversely the understanding is described as 'the pupil of the Soules clear eye', which by looking 'in the mirrour of the phantasie' abstracts the sense information into wisdom (42, 49, 50). Visual perception was therefore a popular means for expressing the nature of the mind regardless of whether it was itself understood to be cognitive. Viewing oneself in 'Deaths mirror' is described as a remedy for those who have not before examined their soul; but humans must be immortal, Davies argues, as 'those glasses which materiall bee' only see material things, whereas when 'our minds we mirrours make' we can partake of the immaterial (63, 85). Thus, Davies reflects the

Neoplatonic dimension of the mind mirror-motif, which is at the same time permeated by conceits gathered from physiological perceptions as well as by notions of cognitive extension.

In the early modern period the association of the glass with subjectivity was contributed to by a medical theory. This theory identified a supposed delusion of melancholy as 'the glass-man' who believed himself made of fragile and transparent glass (MacDonald 154; Speak 195-8; Walkington 71-72). In *Lingua Tactus* pretends that he is suffering from the glass-man delusion, unable to move for fear of shattering, and Olfactus diagnoses him as suffering from the dry heat of melancholy (sigs. B3v-B4v). Shading himself from the light Tactus is able to see through his own fingers and his breast like a window through which he perceives his heart (sig. B4r). Donne transforms this bawdy to high conceit, combining it with eye-mirror metaphors in 'A Valediction: of my Name in the Window'. Here the poet identifies himself with his name engraved on a glass window gazed at by his beloved: "'Tis much that glass should be/ As all confessing and through-shine as I' (7-8); this figures the anxious and yet desired nature of his self-revelation in making himself thus transparent. In 'The Broken Heart' it is a glass-heart that Donne describes, shattered by rejection so that as broken glasses can only reflect a hundred lesser faces, so can he now only ever experience lesser affections. In a letter of 1621, James Howell mockingly describes a 'Urinal Man' in Venice, but goes on to describe how visiting a factory to see glass made (48), produced more reverent associations in his mind of the 'glassy sea' of Revelations (4.6, 15.2). Howell describes the way the furnaces transubstantiated 'dark Dust and Sand into such a specious clear body as Crystall', as the 'Universall-fire, which shall happen at the day of judgement, may by its violent ardour *uitrifie* and turn to one lump of Crystall, the whole body of the Earth'(48). Thus the mirror's capacities lend it to the portrayal of the transformation of resurrection, as well as to death.

Literary critics have variously noted the relation between the early modern mirror metaphor and cognitive processes, technology, and subjectivity; although the focus tends to be directed at one or other of these connections, or at a one-way relation, rather than at their closely interwoven fabric. Elaine Whitaker makes a strong argument for the effect of technological change upon the use and tenor of a metaphor: 'Just as thought is dependent on the properties of language, so it is dependent on objects furnished by technology' (113). Her point regarding the relationship of thought to technology is important but suggests a one-way dependency rather than a dynamic relationship. In the early modern period these concepts might better be reconsidered in relation to evidence of the brain, the body

and the world as reciprocally interactive upon each other in a spiralling developmental relationship. Whitaker also attributes perceptive distortions only to the mirror, rather than realising the role of visual and cognitive processes therein, claiming that it has always been the case that 'Irregularities in the image reside in the imperfections of the mirror. The viewer's ability to see the image represented is presumed' (114). Were early modern writers to assume such trust in the viewer the mirror would be a vastly less interesting metaphor. The ambiguity about whether or not that which is perceived lies in the perceiver or in the mirror-image is creative of uncertainty and dramatic tension. In the tradition of medieval morality dramas a sinner may not initially realise that the darkened reflection he sees in a mirror is caused by his own flaws (Carpenter, 'Masks' 12). As explored in the following chapters, Shakespeare's use of mirror-motifs takes this theme further by exploring not only perceptions of the self and the outside world against one another but also first-person versus third-person perspectives. The early modern subject could turn to the world-as-mirror, to the mirror-as-world, and to the counter-reflection offered by the multiple reflections of different aspects of the subject by the mirroring of the mind within or without the biological being.

Early modern dramas, like earlier morality dramas, also drew attention to their own mirror-like capacities in providing their spectators with an extended form of reflexivity. In Tomkis' *Lingua Anamnestes* describes 'my Lord Comaedes and Tragedus', as his 'fellowes' who 'Both vice detect, and vertue beautifie:/ By being deaths mirrour, and lifes looking glasse' (4.2). John Taylor in tribute to Heywood's *An Apology for Actors* offers this early modern commonplace of play as ethical mirror:

A Play's a briefe *Epitome* of time,
Where man my see his vertue or his crime
Layd open, either to their vices shame,
Or to their vertues memorable fame.
A Play's a true transparant Christall mirror. (sig. a3v)

Davies of Hereford describes the players as imitating Fortune's inconstancy 'by acting all mens parts' and 'Shewing the vices of the time'. The players operate as mirror-images performing an act of extended reflexivity to the spectators: Fortune 'made them Mirrors, by their acting Arts,/ Wherin men saw their faults, thogh ne'r so small' ('Civile' 208). Considering the role that mirror neurons play in enabling humans to experience others' actions, the intuition as to the forceful nature of players acting of parts is now scientifically supported. Finally, given Stubbes railing against the negative influence of most plays, it is ironic that the commendatory poems which

preface his volume place him in competition rather than opposition, by making similar claims to those of the pro-theatricalists: A.D. recites that *The Anatomie* is a 'glasse' in which to behold vice and I. F. also commends the book 'Wherein, as in a Mirrour pure/ Thou mayest behold and see,/ The vices of the World displayed /Apparent to thy eye' (sigs. A1r-v). Thus, plays, players, and books are mirrors and operate as types of extended reflexivity for their partakers.

History, which as we saw in Chapter 4 was compared with biological memory, is also described by Thomas Beard as 'the mistresse and looking-glasse of mans life: insomuch as under the person of another man it teacheth and instructeth all those that apply their mindes unto it, to governe and carry themselves vertuously and honestly in this life' (sig. a1r). Beard combines the idea of text and memory as performing similar functions with the idea that a subject's self-knowledge can be reached through the moral example of other human subjects, as if they are the subject's mirror. Donne's emphasis is on living mirrors, as he suggests that any other living thing will show you as clear a reflection of God as your own reflection in a looking-glass: 'There is not so poore a creature but may be thy glasse to see God in. The great flat glasse that can be made, cannot represent anything greater then it is' (*Sermons* 8: 224). He explains that in this world 'whatsoever hath any being, is by that very being, a glasse in which we see God, who is the roote and fountaine of all being' (224).

Early modern reflexivity is interwoven with the modes of understanding biological, sociocultural and technological processes and beliefs. The concrete or assumed known are used in order to better analyze or imagine the abstract and unknown, and to explore their potential relations to each other. The multiplicity of commonplace applications of the mirror as a literary motif, result in each use casting different shades upon its range of meanings, with a rich and complex play of reflections.

Conclusions

These three chapters on the early modern mind and subject make evident a surprising number of resemblances to current notions concerning the extended mind hypothesis that were discussed in Chapter 1. Early modern discourses about the humoral brain and body share with the recent advances in neurobiological research the belief that significant contributions are made to cognition and subjectivity by non-conscious processes, willed and autonomous subsystems, the emotions and body states, and the brain and body's plasticity. This adds to evidence for the historicity of concepts of cognition and subjectivity as embodied. In addition, this humoral basis was

recognised as being affected by inherited traits, by geographical, sociocultural and technological contexts. The considerable porousness and mutability of the human subject and mind was understood to dynamically incorporate and extend itself via objects, people, language and environments. This adds to evidence of the historicity of concepts of cognition and subjectivity as embedded and extended. The early modern humoral subject is a being whose cognitive processes were understood as distributed within its brain, its body, and its environmental, sociocultural and technological world.

Concepts of cognition and subjectivity as embodied, embedded and extended were circulating in the early modern period, alongside and entangled with various types of disembodied and centralised models, which have also been considered here. Clearly in terms of notions of the humours, spirits and souls, early modern theories of cognition and subjectivity operate according to very different mechanisms than those now harnessed by current extended mind theories. Yet this does not contradict the idea that longer term continuities exist in terms of an ongoing fascination and anxiety about the hybridity and extended nature of the human subject and mind; although, in some respects, the early modern equivalents of these concepts seem to have involved more non-conscious acceptance than they do in modern times. Continuities reflect aspects of a concept that remain viable in relation to the contexts within which they operate, whilst variations in the manifest forms of these concepts reflect the variety of coevolving structures in play at that moment. Early modern concepts about the diverse mix of factors involved in cognition and subjectivity make evident a complex, pragmatic and imaginative understandings of the subject in this world (and the next).

Shakespeare's Natural-Born Mirrors

These last two chapters explore the bearing of modern and early modern ideas about embodiment, embeddedness and extendedness on the literary, through an exploration of how they are revealed and exploited imaginatively in Shakespeare's works. Shakespeare is representative of early modern writers in that he is influenced by both contemporary and classical literary traditions and material, and his works abound with literary explorations of early modern constructions of cognition and subjectivity. The properties and literary tradition of the mirror naturally lend it to the representation of cognition and subjectivity and at this time, when new and improved mirrors were beginning to become more widespread, mirror-motifs in early modern discourses are especially prolific and polyvalent. These chapters tackle the relation between forms of social, technological and self-reflexive mirroring, exploring this earlier vision of self-self and self-other relations as variously fluid or opaque, which invokes familiar concerns about first-person versus third-person access to our own and others' subjective cognitive experiences.

Chapter 5 gathers evidence of the diverse ways in which women and men are figured as natural-born mirrors; primarily examining the themes in terms of humourality, femininity, love and reproduction. The first section focuses on mirror-motifs in the play *Measure for Measure*, which are explored by means of comparison with early modern literary and juridical theories, notions of the mortal humoral subject, and concepts of imitation. The following section goes on to consider depictions of women and offspring as mirrors, and early modern attempts to reconstruct social definitions by re-employing conventional mirror-motifs. The final section examines mirror-motifs in several works, including *Richard III*, 'Sonnet 22' and 'Sonnet 24', which invite discussion of early modern notions of mutual gazing, love's blurring of subject boundaries, and the relation of love to self-love.

Reflecting Images: Mortal and Divine

Early modern understanding of the relationship between the divine and mortal, art and nature, and an original and an image is explored in this section. First the discussion focuses on the portrayal of imitation in 'Sonnet 53', before considering its relation to a mirror-motif portraying the operation of justice in *Measure for Measure*. Further insight into this mirror-motif is offered by comparison with a mirror-motif in

Macbeth figuring physical multiplication, and another in *King Lear* that in contrast figures cessation. These are then set against a second mirror-motif from *Measure for Measure* that questions aspirations of the humoural subject to a God-like objectivity, firmly situating man in his corporeal body and mortal world. These motifs make evident an early modern perception of human cognitive processes as distributed over the humoural subject and the world, with both positive and negative consequences.

In Shakespeare's 'Sonnet 53' a living human is positioned in the place of classical figures of beauty. Jonathan Bate describes how Shakespeare inverts the early modern motif whereby one's beloved is described as an imitation of a classical archetype by claiming instead that 'classical figures are imitations of his own beloved' (89):

Describe Adonis, and the counterfeit
Is poorly imitated after you.
On Helen's cheek all art of beauty set,
And you in Grecian tires are painted new. (5-8)

Whilst, as Bate goes on to argue, concern is expressed by Shakespeare in various sonnets, such as 'Sonnet 59', about the impossibility of true literary originality, this is tempered by making imitation metamorphic and by exposing the original as dependent upon its reiteration (91-92; see also Williamson 145). Continuing debates about the nature of representation in human culture provide a modern parallel. Butler describes Irigaray's concept of critically miming mimesis as a citation or imitation that repeats the origin in order to displace it as origin: 'This is citation, not as enslavement or simple reiteration of the original, but as an insubordination that appears to take place within the very terms of the original, and which calls into question the power of origination' (*Bodies* 45). Butler has emphasized the image's re-creation of the 'original' (91), but the relationship can also involve two-way directionality between origin and image, or as in 'Sonnet 53' between literary precedent and descendent. This dynamic holds further implications for a reading of two of *Measure for Measure*'s mirror-motifs.

Measure for Measure's courtroom mirror-motifs compare the relationship between divine and human justice using several notions of originals and images. The first mirror-motif is described as having the power to read the unborn future, reflecting belief that mirrors could provide supernatural cognitive abilities. Angelo, acting deputy to the Duke of Vienna, has taken up juridical duties and the reformation of the law, and consequently has sentenced Claudio to death for prenuptial fornication with his fiancée. Angelo insists on the punishment's necessity,

depicting the awakened law looking in a prophetic mirror where it sees the future infringements that would otherwise result:

The law hath not been dead, though it hath slept.
Those many had not dared to do that evil
If the first that did th' edict infringe
Had answered for his deed. Now 'tis awake,
Takes note of what is done, and, like a prophet,
Looks in a glass that shows what future evils,
Either raw, or by remissness new conceived
And so in progress to be hatched and born,
Are now to have no successive degrees,
But ere they live, to end. (2.2.92-101)

Angelo presents a mirror that shows reproducing evils that the law can pre-emptively prevent by admonitory punishment. A contemporary equivalent of this view can be observed in William Baldwin's description of the operation of early modern legal precedent and his aim in writing *Mirour for Magistrates*: 'For here, as in a mirror or loking glasse you shal se if any vice be found, how the like hath ben punished in other heretofore, wherby admonished, I trust it will bee a good occasion to moue men to ye soner amendment' (sig. iiii). Montaigne critiques this concept of legal justice, a logic of condemning to correct others, not the accused, and he remarks on the arbitrariness of the laws of different countries and times, which only 'take their authority from possession and usage', so that 'it is dangerous to trace them back to their birth.' ('Of the Art' 854; 'Apology' 534). This aligns with Butler's modern depiction of laws as conventions that have 'no other legitimating authority than the echo-chain of their own reinvocation' (*Bodies* 107). Butler describes laws operating in terms of citation: the judge 'reinvokes the law, and, in that reinvocation, reconstitutes the law' (*Bodies* 107) As in *Measure for Measure* the law is depicted as part of a signifying chain that must be enacted in order to retain its authority, although it is also constrained by the precedents.

The mirror-motif's use of corporeal terminology indicates the use of bodily processes to understand cognitive, behavioural, and juridical ones. Angelo figurally evokes a susceptible penetrability and reproductivity parallel to the processes that occur in an impregnated female body. Evils would be 'conceived', 'hatched' and 'born', with 'hatched' suggesting their bestial nature. Instead the law through an abortive measure will prevent the reproduction of future generations of evils. Angelo's statement would have seemed reasonable to many spectators in an early modern audience since it represents both conceptual norms and their legal system's logic. Its plausibility is only explicitly thrown open to question later in the play. Yet

given the relatively high incidence of prenuptial fornication in the early modern period some audience members may have sympathised with Claudio's predicament. In Spufford's description of twopenny chapbooks she comments that numerous heroines agree to sexual intercourse in return for the promise of marriage, and that this reflects ambivalence towards real incidents of pre-marital intercourse, with ecclesiastical courts often accepting as mitigation a private agreement to marry (167). Shakespeare imaginatively figures a contemporary issue through means of the play.

Maus describes that English courts required both 'an overt act' and 'a guilty mind' to prove guilt in a state trial; the proof of a guilty mind was to be accessed by the judge's or juror's resort to their own inwardness, as within one's own heart the verdict would be found (113). Claudio's sister, Isabella, similarly appeals to Angelo to look inward in making his judgement:

Go to your bosom;
 Knock there, and ask your heart what it doth know
 That's like my brother's fault. If it confess
 A natural guiltiness, such as is his,
 Let it not sound a thought upon your tongue
 Against my brother's life. (2.2.139-44)

Significantly, this indicates belief in a potential sharing between humans, as another may be accessed through one's own inwardness, and that the sharing between one's own faculties may only be partial, with the need to actively search out knowledge of oneself. This shared humanity, our 'natural guiltiness', also suggests a concern over the extent to which judges and jury are potentially implicated in crimes they judge and so of the limited and problematic nature of the justice wielded. It sets up a distinction between humans' limited, embodied, subjective and contextual vision and God's transcendent omniscience. Rogers distinguishes between four types of justice: celestial, natural, civil, and judicial (C2v). Concern over shortfall is evident in Breton's definition of an 'Unworthy Judge' who follows the words rather than the matter of justice: 'He is more moral than divine in the nature of policy, and more judicious than just in the carriage of his conceit' (*Good* 227).

Angelo, the unworthy judge of *Measure for Measure*, himself undermines his depiction of the law objectively looking in a mirror that enables a God-like omniscience. In Act 2 Scene 4 he attempts to seduce Isabella in exchange for granting her plea, with the weakness of the actual wielder and his claim revealed by his dark mirroring of Claudio's crime. Humans share not only inwardness but a flaw, yet as implied in Isabella's appeal, condemnation tends to involve forgetting our relation to those we condemn. Butler comments that with the failure 'to own one's

limitations', we lose the chance to experience the 'kind of reflection that takes place when judgements are suspended': a self-knowledge of our own opacity and humanity (*Giving* 45-46). His seduction attempt undermines Angelo's insistence that he is administering an impersonal system. In fact, Isabella points out that those in authority are particularly susceptible to using it to conceal their own sins:

Because authority, though it errs like others,
Hath yet a kind of medicine in itself
That skins the vice o'th'top. (2.4.137-39)

Through a commonplace corporeal comparison, moral vice is figured as a sore, with authority the mask under which it festers. Angelo's claim to wield a transcendental authority is a skin-deep cover up of the 'natural guiltiness' of embodied and embedded human authority. Aspirations to impermeable containment are shown as contributing not to claims of divine authority but to human immorality.

Montaigne provides a further early modern parallel. He describes judicial 'vicious violence' as having more to do with the judge than the fault ('Of the Art' 861). Failure to recognise one's own limitations involves a problematic projection of one's own subjectivity onto the judged. Extending our trail further back, Montaigne quotes from Plato: "'If I find a thing unsound, is it not because I myself am unsound? Am I not myself at fault? May not my admonition be turned around against me?'" (861). This admonitory mirror then is not prophetic and didactic in the way originally represented by Angelo, but instead invokes a mirror that reflects one's own sins back at the viewer. This finds a parallel in Grapes' description of a play by Lewis Wager in which Mary Magdalen sees her own sins in Law's mirror (129). Moreover, the mirror-motif illuminates, and is illuminated by, the biblical passage from which Shakespeare took the title: 'Iv'dge not, that ye be not iudged...and with what measure ye mete, it shall be measured to you againe' (Matthew 7.2). The act of judging in *Measure for Measure* itself performs judgement on the judge. Mirror-motifs visually demonstrate a two-way relationship between the creation of the original by the image and the image by the original. The mirror of the law is shown by Angelo's hypocrisy as operating humbly through the upholder of it, as a form of extended reflexivity.

In *Macbeth* and *King Lear* as in *Measure for Measure* the characters' and audiences' expectations are actively invoked then overturned. In *Macbeth* the mirror-motif again combines prophesy and procreation; the similarity of structure used is symptomatic of the way in which general processes are conceived of in relation to understanding of the body. The Witches show Macbeth a vision of eight kings (representing kings from his time to the Elizabethan present) and then reflected in a

glass held by the eighth king many more kings (belonging to the Elizabethan future); but Macbeth's expectations are frustrated, as rather than the glass reflecting his biological replicas, Banquo's offspring are reflected (4.1.126-39). Whilst Angelo uses the mirror-motif to figure the perpetuation of criminal acts through the ages, here it figures a subject's perpetuation via biological offspring.

The mirror-motif can signal not only forms of multiplication, but also of cessation, both indirectly and directly. In earlier versions of *The Tragedy of King Lear* Cordelia lives to succeed Lear, but in Shakespeare's version the confounding of expectation is referred to by the same mirror-motif that reveals Cordelia's death:

LEAR	Lend me a looking-glass.
	If that her breath will mist or stain the stone,
	Why, then she lives.
KENT	Is this the promised end?
EDGAR	Or image of that horror?
ALBANY	Fall and cease. (5.3.235-38)

The failure of the stone-mirror in Lear's hand to mist with her breath is anticipated in Lear's accusation that those watching are emotionless 'men of stones' (5.3.231). Implied by the term 'the promised end' is a divine Judgement Day, but it is neither the end promised to characters hoping for a just world, nor is it the end promised an audience expecting a happy ending. Instead that this end is 'an image' of 'that horror' implies that her unjust death is a prefiguring of the catastrophes attendant on the world's end (in Christian belief). A moment later, Lear's mistakes that Cordelia stirs, momentarily raising hopes only to further heighten the plummeting sensation of irredeemable tragedy.

A fluidity of subjectivity suggested by a playing system in which players sometimes occupied several roles also lends texts added resonances. Allan Shickman suggests that a mirror carried by Lear's Fool might have been employed here as a prop, and that since the Fool would have been played by the same boy-actor that plays Cordelia, as his truth-telling double he has one final truth to tell through the mirror: 'the mirror would become in the hand of the expiring king a symbol of the ultimate truth of death and of the ultimate self-knowledge' ('The Fool's' 86). The mistless glass offers a silent closing truth by the absence of breath; this is a visual parallel to Hamlet's anticipation of death: 'the rest is silence.' (5.2.300). The connection between life as breath and a mirror as death is evident in *Pericles*: 'For death remembered should be like a mirror/ Who tells us life's but breath, to trust it error' (*Pericles* Scene 1, 88-89). Breath is life in humoral ontology which as Kuriyama describes, entwines the means of communication and of life (340). The

power of the mirror-motif is its ability to multiply represent the transience of breath, spoken words and life and the emptiness, death and silence that follow; enabling through figural images more complex representations and understanding of the nature of being an embodied human subject.

An image of man's embodied and mortal state is called upon in *Measure for Measure* by Isabella, who mocks Angelo's lack of self-knowledge and protests against his ostentatious use of power:

But man, proud man,
Dressed in a little brief authority,
Most ignorant of what he's most assured,
His glassy essence, like an angry ape
Plays such fantastic tricks before high heaven
As makes the angels weep, who, with our spleens,
Would all themselves laugh mortal. (2.2.120-26)

In describing man's essence as 'glassy' the biblical notion of prelapsarian man as the image of God is evoked (Gen. 1.26-7), but it is juxtaposed with a depiction of delusionary self-exaltation stemming from pride, the cause of the Fall; the subject as 'theodroid' is brought into play only in order to establish man's distance from God. The description of man as 'dressed' and that he 'plays' suggest the performative nature of the misperceived self-image; ironically as declaimed in a play on a stage. The cliché of clothes making the man is variously endorsed and played on in early modern discourses, as we saw in the previous chapter. Brachiano in Webster's *The White Devil* scornfully describe his brother-in-law thus: 'all his reverend wit/ Lies in his wardrobe; he's a discreet fellow/ When he's made up in his robes of state' (2.1.184-6). A farcical parallel occurs in Tomkis' *Lingua*, where Tactus clothed in Robe and Coronet declares his very blood and complexion 'transform'd' to the 'temper of a King', sighing 'O for a looking glasse' (sig. B3r). Montaigne links sartorial and literary aping, mocking those who imagine in copying someone's robes or words you have the body or matter; as does Angelo acting as the Judge ('Of the Education' 155).

At the same time, the ape-metaphor, as Curtius explains, was traditionally used to describe servile imitation; for example, Holofernes in *Love's Labour's Lost*, who in judging of a sonnet bursting with commonplaces mocks that 'Imitari is nothing. So doth the hound his master, the ape his keeper, the tired horse his rider' (538-540; 4.2.117-8). Man descends to bestial mimicry through the very act of vainly imagining he has God-like authority. Shakespeare offers a satiric inversion of a familiar Elizabethan entertainment of apes mimicking man, with his figuring of a

judge publically put on divine trial, become man as ape, a rung down the ontological ladder, whilst thinking himself a God in his wielding of justice.

The distinction between animals and man was being called into question by sceptics. Montaigne, in mock of the medieval and humanist view that man's superiority was indicated by his face being distinctively raised up to the stars, points out: 'What animals do not have their face up high up and in front, and do not look straight forward like ourselves, and do not discover...as much of heaven and earth as man?' ('Apology' 433). The distinction of humans as uniquely special is eroded by humans being set next to our nearest mammalian neighbours, displaying a subjectivity that differs only in co-opting external structures of dress and authority. This conjures Clark's conception that humans do not differ so much from animals other than through their ability to co-opt external structures, and like Clark these early modern contentions lead to the same ironic conclusion that it is through this ability to co-opt these structures that we hallucinate an authoritative and fixed self (*Mindware* 176-81). The indictment that Angelo is 'Most ignorant of what he's most assured' emphasises a lack of self-knowledge as the operative dynamic.

Grabes points out that 'essence' had also come to mean 'the material nature' of something and so 'glassy essence' indicates mortal frailty as well as spiritual weakness (219). This is especially the case if it is considered in light of the contemporary melancholic glass-men phenomenon. Mention of the spleen, a seat of the passions, and so of man's anger, conveys again the embodied humoural nature of human cognitive processes, as does mention of the laughter the angels lack. Human physicality is also indicated by reference to his authority as 'brief' contrasted with the immortality of merciful angels, again recasting human glassiness as a brittle creatural frailty caught in a self-serving illusion. *Measure for Measure* suggests that an understanding of subjectivity as embodied, embedded and extended reveals the illusoriness of our aspirations to a fixed and stable, or God-like, subjectivity.

The narcissistic circularity of the subject invoking its own image, is here represented by Angelo who whilst imagining himself as Law personified is shown by Isabella to play a less exalted part in a more complex and flawed human world. Isabella recasts Angelo as the subjective mirror he is holding up, rather than the objective Law he vaingloriously imagines, by mimicking his mimetic motif. Angelo fails to objectively recognise man's microscopic potency and duration in universal terms. Perhaps an implication is also that to aspire to the equivalent of the angels' viewpoint whilst retaining knowledge of one's own mortal humourality, is necessary to maintain realism about oneself and one's actions. *A Midsummer Night's Dream's* description of a poet's two-way view encapsulates this: 'The poet's eye, in a fine

frenzy rolling,/ Doth glance from heaven to earth, from earth to heaven' (5.1.12-13). The mirror-motifs in this section make evident the blurring of boundaries between the objective and subjective, outside and inside, past and future, human and animal, and the mind and the world.

Glass Women

I thought upon the complement which a Gentleman put upon a Lady in England, who having five or six comly Daughters, said, He never saw in his life, such a dainty Cupboard of Crystall-Glasses; the complement proceeds it seems from a saying they have here, That the first handsom Woman that ever was made, was made of Venice-Glasse, which implies Beuty, but brittlenes withall (46)

James Howell in his letter of 1621 from Venice writes of how upon seeing 'so many sorts of curious Glasses made here' he was reminded of their conventional association with women. Howell also relates it having become a female creation myth; this relates to the biblical version of man as made of dust and therefore as frail (Gen. 2.7; Ps. 103.14). Howell observes glass is made through transmutation of 'Dust and Sand' into 'such a diaphanous pellucid dainty body as you see a Crystal-Glasse is' (46). In this model, women alone receive the ambivalent compliment of a glass-like beauty and fragility; this reflects women's frequent association with glasses. This section begins with discussion of conventional mirror-motifs of feminine vanity and of mirror-motifs' associations with sexual reproduction and biological offspring. It then considers Shakespeare's depiction of women's attempts to refashion the frames constraining their subjectivity.

Feminine vanity was a theme variously engaged with by Shakespeare. In *Love's Labour's Lost*, the King's sonnet to the Princess begs that she love him and not herself as reflected in the tears he sheds for love of her: 'But do not love thyself; then thou wilt keep/ My tears for glasses, and still make me weep' (4.3.34-35). The indicated irony is that he, out of love, may furnish her with a means of narcissistic self-reflection. In *A Midsummer Night's Dream* there is a deliberate ambiguity as to whether Helena has been misled in her self-estimation by her mirror or her own eyes, when she realises her love is unrequited: 'What wicked and dissembling glass of mine/ Made me compare with Hermia's sphery eyne!' (2.2.104-5). 'A Very Woman' is described by Overbury thus: 'She thinks she is fair though many times her opinion goes alone, and she loves her glass' (33). Ben Jonson describes his 'Epistle. To Katherine, Lady Aubrey' as

Yourself but told unto yourself, and see

In my charácter, what your features be,
You will not from the paper slightly pass:
No lady, but, at some time, loves her glass. (23-26)

As in Spenser's invitation to Elizabeth I, mentioned in Chapter 5, the commonplace of women's vanity is harnessed with the text proffered as the true mirror of herself, which he invites her to admire. The association of mirrors with items of vanity is suggested by its being listed along with trinkets and baubles in *The Winter's Tale* by Autolycus, a man who disdains honesty (4.4.585-88). Similarly, Tomkis has Tactus joke that 'there is such doing with their looking-glasses...a Ship is sooner rigd by farre, then a Gentlewoman made ready' (*Lingua* sig. I2v). By contrast the modest Perdita in *The Winter's Tale* remarks that dressed up in finery she would 'swoon, I think,/ To show myself a glass' (4.4.12-13). In a riddle the Fool in *King Lear* obliquely compares Lear's vanity to that of a woman: 'for there was never yet fair woman but she made mouths in a glass' (3.2.34-35). Remembering the ending in *King Lear* in which a fair woman fails to make mouths in a glass, this is poignantly echoed in the tragedy of death's mistless looking glass.

This literary tradition is influenced by Ovid, Petrarca and biblical scripture. Marlowe's translation of Ovid's 'Liber Secundus: Elegia 17' laments Corinna's vanity reproduced in her false-glass: 'But by her glasse disdainefull pride she learns,/ Nor she her selfe but first trim'd up discernes (9-10). Petrarca's 'Sonnet 45' describes the mirror as his rival for Laura's affections as he has been replaced in her heart by her own image, whilst in 'Sonnet 46' the mirror is blamed instead of Laura. Meanwhile, Donne draws on the association in Exodus 38.8 of women with mirrors and vanity, in order to indicate both humanity's general vanity and its potential for purification:

Moses made the laver in the Tabernacle, of the looking glasses of women: Scarce can you imagine a vainer thing (except you will except the vaine lookers on, in that action) then the looking-glasses of women; and yet Moses brought the looking-glasses of women to a religious use, to shew them that came in, the spots of dirt, which they had taken by the way, that they might wash themselves cleane before they passed any further. (Sermons 8: 224)

The idea of women as narcissistically supplemented by mirrors, or by suitors acting as mirrors, descends from classical and Christian traditions. Mirror-motifs connected with maintaining personal appearance or love demonstrate a tendency to associate negative aspects with women in the form of vanity and narcissism, with the

displacement onto women of anxieties about the mutability and malleability of the subject.

Yet, in Shakespeare's 'Sonnet 3' the beloved is advised to: 'Look in thy glass, and tell the face thou viewest/ Now is the time that face should form another', as the lover attempts to harness the beloved's narcissism, to turn him from technological to a biological mirror-image, by reminding the beloved that he is his 'mother's glass', a visual echo in a chain of mirrors, that only persists through repetition (1-2, 9). Rene Graziani's study of the numbering of the sonnets, explains that the number two was understood as female and three as male, which combined to form the production of a foetus in 'Sonnet 5' (80). The foetal allusion to man as flow constricted by a glass-like body of womb: 'A liquid prisoner pent in walls of glass' conjures the diagrams in medical texts of babies in the womb depicted as if in glass urinals (10; Raynalde sigs. K9r-K10v). Mirror-motifs fertily allude to a woman's encompassing womb and the fragility of a woman's hymen, and so to her reproductive capacity and virginity or chastity. Bosola in Webster's *The Duchess of Malfi*, voices suspicions of the Duchesses' pregnancy as: 'There was a young waiting-woman had a monstrous desire to see the glass-house... And it was only to know what strange instrument it was should swell up a glass to the fashion of a woman's belly.' (2.2.5-10). Whilst the Cardinal simultaneously deploys misogynistic mirror-motifs concerning women's mutability, with the need of the technological assistance of a glass telescope, before an unchanging woman be found:

Sooth, generally for women;
A man might strive to make glass malleable,
Ere he should make them fixed ...
We had need to go borrow that fantastic glass
Invented by Galileo the Florentine
To view another spacious world i' th' moon,
And look to find a constant woman there. (2.4.13-19)

Permeability and inconstancy are repeatedly conjoined as feminine glass-like qualities.

In *The Rape of Lucrece* Lucretius poignantly captures in the image of his daughter as a 'broken glass', her rape, subsequent suicide and the mirror-image of his youth now shattered:

Poor broken glass, I often did behold
In thy sweet semblance my old age new born;
But now that fair fresh mirror, dim and old,
Shows me a bare-boned death by time outworn.

O, from thy cheeks my image thou hast torn,
And shivered all the beauty of my glass,
That I no more can see what I once was. (1758-64)

Montaigne's essay 'Of the Resemblance of Children to Fathers' describes this wondrous chain of resemblances: 'What a prodigy it is that the drop of a seed from which we are produced bears in itself the impressions not only of the bodily form but of the thoughts and inclinations of our fathers!' (701). When the mother is depicted as contributing to the formation of the child it is more frequently in negative terms:

I have bewept a worthy husband's death,
And lived with looking on his images.
But now two mirrors of his princely semblance
Are cracked in pieces by malignant death,
And I for comfort have but one false glass,
That grieves me when I see my shame in him. (R3 2.2.49-54)

Richard's mother laments the death of her two sons in terms of losing accurate images of their father, whilst now she has only Richard's 'false glass', a motif that suggests not only his lack of similarity to his father, but also his untrustworthy nature, and deformity, for which she holds herself accountable (this is the only example in Shakespeare that suggests any distinction between a mirror as positive and a glass as negative). Misogyny operated through mirror-motifs that suggest failure of the child to resemble the father was caused by the mother: 'Thy mother's son! Like enough, and thy father's shadow. So the son of the female is the shadow of the male – it is often so indeed – but not of the father's substance' (2H4 3.2.120-122). The association of glasses with women reflects attempts to purge the fragile and opaque mutability of the humoural subject, through the displacement of concerns onto the female sex and gender.

However, though early modern anxiety about extended subjectivity is displaced onto women, it is also reformed by them. Mary Wroth's *Pamphilia to Amphilanthus* provides an instance penned by a contemporary woman, and is the first known sonnet sequence by an English woman writer. The sequence addresses a male beloved inverting the convention of male lover-poet and female beloved-muse. 'Sonnet 46' describes how in a well the female lover sees: 'Myself a living glass as well as she,/ For love to see himself in truly placed' (13-14). This description evokes the lover's third-person relation to herself, enabled by the glass, looked in not out of self-admiration but to imagine what he sees when he looks at her, and so involves her taking up the male position of gazer, as the female poet does in writing. Yet it also

which the feminine 'is that which is produced through displacement and which returns as the possibility of a reverse-displacement' (*Bodies* 45).

The inherent instability of the mirror as motif made it ripe both for its application to women and for the reformation of these stereotypes. In *The Two Noble Kinsmen* the Second Queen appeals to Hippolyta, once an Amazonian queen and soldier, as 'a dear glass of ladies' calling on her to use feminine wiles to manipulate her husband Theseus, since she argues the feminine power of speech give Hippolyta more power over him than he has over her or than she had through adopting a masculine war against him (1.1.89-90). It is Hippolyta's sister Emilia, who responds to the Three Queens' prayers that on their behalf she beg pity of Theseus 'in a woman's key', but she redescribes her actions in a language which suggests it as a means of force rather than a humble entreaty:

Being a natural sister of our sex,
Your sorrow beats so ardently upon me
That it shall make a counter-reflect 'gainst
My brother's heart, and warm it to some pity,
Though it were made of stone... (1.1.125-9)

The predisposition of the female sex to be affected by another's emotions is argued by Emilia in her citing of her gender relation to the Queens as the cause of her heterophenomenological affinity. Thus whilst carefully fashioning her empathy as belonging to an emotionally impressionable feminine nature, and her behaviour as fuelled by that feminine virtue, her image of counter-reflecting, like a mirror, suggests an intensification of the forcefulness of the request, as when the sun's heat and light is intensified by reflection. The concept of the subjective viewpoint of another being internalised by a subject is extended further here as it is shown as thence being externalised upon another subject. Again made evident is the way in which preconceptions of women could be reformed in order to serve different ends. Chaucer figured the 'regne of the Femenye' as overcome by Hippolyta's marriage to Theseus, with the passions figurally overcome by reason ('The Knight's Tale' 866); Shakespeare shows through the feminine that the passions are never overcome and are a vital component of human fellow feeling.

The final example of Shakespeare's depiction of feminine critical mirroring of gender stereotypes involves the identical twins of *Twelfth Night*. Viola and Sebastian separated by shipwreck think each other dead, and Viola dressed as a man is in amazement when she sees her brother again:

He named Sebastian. I my brother know

Yet living in my glass. Even such and so
In favour was my brother, and he went
Still in this fashion, colour, ornament,
For him I imitate. (3.4.344-48)

Viola's identical appearance plays with issues of individuality and biological, cultural and technological doubling, as well as the stereotype of the female as sexually an inversion of the man, as a mirror-image is an inversion of reality. His mirror-image appears in her mirror ironically through her imitation of him, assisted by the cultural attire of a man. Then seeing her physical double, she recognises him not as himself, but as the replica of her mirror-image, in a continuing series of regresses in which the mirror-image has become substantial and the twins shadows. The original appears to exist only through its reiteration by an image. John Lee proposes that Shakespeare uses twins 'to offer epistemological problems', to provide a 'sceptical presentation of human reason', and to explore the reciprocity involved between art and nature (327): 'Shakespeare views the world of nurture and the world of nature as shaping one another, and so art – dramatic and literary art – as being not only able to copy or re-present, but also to produce' (329). Underlying this mirror play appears the outline of Shakespeare's concept of sociocultural and biological, and artistic and natural forces as reciprocally constructive.

Historical displacements onto women, onto other nationalities, onto the emotions, and onto the body are attempted as a means of purging and shoring up the leaky walls of human subjectivity. Whilst in Shakespeare's works female characters' attempts to reform misogynistic mirror-motifs involve the inversion of conventions through reworkings of the material, rather than outright rejections of negative stereotypes; such a move was perhaps beyond the imaginable within the constraints of early modern sociocultural beliefs.

Looking Glasses of Love

The dynamics of love involves visual perception and physicality, and it can be closely related to narcissistic self-love. Beginning with a brief examination of the narcissism explicit in Shakespeare's 'Sonnet 22', this section then considers Thomas Nagel's depiction of the visual and bodily arousal and self-awareness that occurs through love or sexual desire. It is a story in which he tellingly uses a mirror, which picks up on themes of social mirroring and of narcissistic elements in love, as well as the heightening of self-awareness through being in love or looking in a mirror. This leads into a discussion of the role of visual perception in early modern love and of

the portrayal in 'Sonnet 24' of a visual and physical love, which emerges from early modern beliefs about vision and souls. The discussion draws to a close with an analysis of *Richard III* and early modern views on narcissism and rejection of love.

The theme of self-love in love haunts early modern depictions of romantic love, and nowhere more evocatively than in Shakespeare's 'Sonnet 22':

My glass shall not persuade me I am old
So long as youth and thou are of one date;
But when in thee time's furrows I behold,
Then look I death my days should expiate.
For all that beauty that doth cover thee
Is but the seemly raiment of my heart,
Which in thy breast doth live, as thine in me;
How can I then be elder than thou art? (1-8)

The lover does not identify with his actual mirror-image because of his identification with his beloved. The use of another person and a mirror are set against one another, technological and social supplements to the subject are juxtaposed as means of self-knowledge, with reflection by the form of the beloved presented as the true glass to the lover's phenomenological experience. The lover adopts the beloved young man's qualities of youth and beauty, which are imagined his own through his projective subjectification of the young man. The social glass is favoured to the technological equivalent, but as Varela, Thompson and Rosch suggest people who are self-interested, rather than other-interested, engage in 'self-referential relationships with the other' (247). The touching reciprocity of the transposition of their hearts (9-12), is undercut by the closing couplet's injunction: 'Presume not on thy heart when mine is slain;/ Thou gav'st me thine not to give back again. (13-14). A contributory factor to such identification of oneself with another was the fluidity of intersubjective boundaries, but also relates more generally to the potential effect of being in love on a lover.

The significant role played by mirroring in love and desire is a topic on which Nagel has insights to offer. Following Sartre's definition of that which is sought by sexual desire as 'double reciprocal incarnation', he describes the heightened perception of both the sexual object and of oneself. Appropriating Shakespeare's famous lovers, Nagel imagines the beginning of an attraction within a mirrored room: Romeo noticing Juliet in the mirror is in 'the sexual grip' of his body; Juliet's bodily presence is intensified by sensing Romeo in the mirror, and Romeo tracing her gaze through the mirror realizes it is directed at him which 'gives him a sense of his embodiment not only through his own reaction, but also through the eyes and

reactions of another'; Juliet senses now that he senses her and then he senses that she senses that he senses her with escalating arousal accompanying each stage. Thus, both an enhanced sense of the other's and of our own embodiment are produced by desire. This 'proliferation of levels of mutual awareness' is for Nagel an example of 'the complexity that typifies human interactions' (46). This exchange may be contributed to by the mirror neuron system, adding a neurophysiological basis for the sensation of vibrant interactive mirroring in love, and for the intimacy of the exchange in 'Sonnet 22'.

'Mutual reflexivity' is my term to describe this two-way extended reflexivity. In cases of reciprocal love you see yourself in the lover's eyes and so experience his desire for you, which increases your desire and so on; and if mirror neurons play a part (as the descriptions here seem to intuit), then at the same time as your own experience of desire is firing off neurons, they are also firing through observation of the other's desire. This would create a double mirroring effect of seemingly infinite regress. Understanding of 'mutual reflexivity' and of self-love in love dates back to Plato's depiction of a lover looking at their beloved as they would look into a mirror: the beloved looking into the eyes of the lover 'fails to appreciate that he is seeing himself in his lover as in a mirror. He has contracted counter-love as a reflection of his lover's love' (255d-e). The dynamic role of visual perception in love has also recently been connected by Ramachandran to the close wiring of vision and the emotions ('Marco Polo'). In medieval and early modern writing on love a combination of extramissive and intromissive theories were used: extramission describing the process by which visual or light rays are emitted by the eyes of the lover, and conversely intromission describing the process whereby atoms or light rays are transmitted from the lover to the eye of the beloved. Thus, in 'The Ecstasy' we find Donne's description of the lover's eyes united by gazing as their hands are by holding:

Our hands were firmly cemented
With a fast balm, which thence did spring;
Our eye-beams twisted, and did thread
Our eyes, upon one double string' (5-8)

Material physicality and reflective visuality are counterparts in this exchange of love. A. Mark Smith describes that visual penetration was understood to cause an impression on the imagination and the memory, through a process analogous to engraving with its time-span and clearness dependent on the intensity or repetition of the impression (58-66). This describes perception, and by extension cognition,

as occurring through a psychophysiological impressionability. Due to its impact in *Love's Labour's Lost* Boyet has to verbalise the symptoms of love detectable in Navarre to the Princess, as Navarre has lost the power of speech or action. Navarre's heart is described as imprinted with her image, which has entered through the eyes where her image is glassed (3.1.235-36). Again the narcissism and possessiveness of love is implied, with her 'form' described as 'his'. Nevertheless, Navarre 'enchanted with gazes' experiences a synaesthetic reaction: 'To feel only looking', like Nagel's hypothetical couple (3.1.240, 3.1.246).

A mirroring process meticulously figured in 'Sonnet 24', develops the representation of reciprocity through the play of eyes on one other:

Mine eye hath played the painter, and hath steeled
 Thy beauty's form in table of my heart.
 My body is the frame wherein 'tis held,
 And perspective it is best painter's art;
 For through the painter must you see his skill
 To find where your true image pictured lies,
 Which in my bosom's shop is hanging still,
 That hath his windows glazed with thine eyes.
 Now see what good turns eyes for eyes have done:
 Mine eyes have drawn thy shape, and thine for me
 Are windows to my breast, wherethrough the sun
 Delights to peep, to gaze therein on thee
 Yet eyes this cunning want to grace their art:
 They draw but what they see, know not the heart. (1-14)

A running conceit of requiring another's eyes in which to truly perceive oneself, begins with a subject being figured as reliant upon another person in order to truly perceive himself; a presentation of a third-person perspective as more accurate than a first-person perspective. Wilson describes the eyes as two-way mirrors 'not geuen to man onely to se, but also to shewe, and set forth the meanyng of his mynde' (*Arte* 116). For this reason the deflowered Hero, in George Chapman's continuation of Marlowe's *Hero and Leander*, is in anguish that her shame shall show:

For as a glasse is an inanimate eie,
 And outwarde formes imbraceth inwardlie
 So is the eye an animate glass that showes
 In-formes without us. (464-65)

This was not only a literary conceit, as Crooke remarks that 'by the eyes as by a window, you may looke euen into the secret corners of the Soule...the eyes are the mirror or Looking-glasse of the Soule' (8-9). Robert Baldwin in his study of mutual

gazing as an amatory motif in the early modern period, demonstrates that the theme of reciprocal gazing was commonplace in Elizabethan poetry, and that it was linked to the tradition of spiritual gazing, with an entwining of 'the sacramental and the sensuous, the sacred and the profane' by both traditions (38-43). Yet, the lack of distinctness between one person and another in the play of mutual reflections leads to concerns that love is but an extended form of narcissism, as explicitly worked out in Shakespeare's sonnets and implied generically by the monologic sonnet form itself.

The young man in 'Sonnet 24' is shown as dependent on the speaker in order to possess an understanding of his own disposition. The reference to 'perspective' could mean to 'see through' as Helen Vendler points out, as well as suggesting the ability to view things in perspective via a necessary distance (142). This picks up on the early modern artistic use of perspective in art, with the explicit sense that the beloved is shown accurately; yet since perspective was also associated with visual tricks, there is an oblique implication that the reflected image is viewed flatteringly 'awry'. While a mirror is not referred to directly the suggestion is of a series of reflections, and the eyes are described as being 'glazèd', both in terms of transparency and reflectiveness, with the passions the cause of this glazing. The implication of 'true image' in addition to 'beauty's form' initially suggests that inward qualities as well as physical image are imaged and corporealised by the lover. However the couplet's conclusion that the eyes lack the ability to portray the heart, suggests the reflection is in fact just an outward delineation of the visible; a reading supported by the description of the eyes' role in 'Sonnet 46', 'mine eyes' due is thy outward part'(13). The lover's complaint in the closing couplet indirectly places in question the implied reciprocity and the accuracy of a third-person perspective (13).

As in 'Sonnet 22' suggestions of two-way interdependency are implied, then collapsed. The stress in 'Sonnet 24' is on the lover's contribution to the beloved, who is shown in need of the lover, reversing the actual dependency of the lover on the beloved to provide him access to the qualities he lacks. In both sonnets the lover while striving to construct an image of romantic reciprocal love, finds himself trapped within various asymmetric constructions through his projective subjectification or projective objectification of the beloved; 'projective subjectification' is my own term, used to describe the effect of projecting one's subjectivity onto another subject or object, whilst 'projective objectification' is used to describe the failure to acknowledge another's subjectivity. The lover becomes the conveyor of a narcissistic transaction, as obliquely signalled by the use of 'bosom's shop' in 'Sonnet 24'. This reflects the use of trading terminology in the early modern

economy of love. The phenomenological perspective that another subject can offer the subject is shown to be as potentially problematic as our own.

In *Richard III* Richard discusses his perspective of himself with himself in two soliloquies that inversely mirror each other. In the first passage Richard explains why his physical deformity causes him to reject both love and self-love:

But I, that am not shaped for sportive tricks
Nor made to court an amorous looking-glass,
I that am rudely stamped and want love's majesty
To strut before a wanton ambling nymph,
I that am curtailed of this fair proportion,
Cheated of feature by dissembling nature,
Deformed, unfinished, sent before my time
Into this breathing world scarce half made up –
And that so lamely and unfashionable
That dogs bark at me as I halt by them –
Why, I in this weak piping time of peace
Have no delight to pass away the time,
Unless to spy my shadow in the sun
And descant on mine own deformity. (1.1.14-27)

Richard in comparing himself to his frolicking brother, King Edward, collates his problem in one phrase: he 'wants love's majesty'. Unlike his brother he has neither love nor the majesty of a king. That he has been 'half made up' and is 'unfashionable' suggests the body's sartorial equivalence, whilst 'stamped' suggests counterfeiting terminology; both commonplace analogies between technological and natural processes suggestive of the habitual analogies made between these. The soliloquy concludes with the ambiguous statement that his deformity, unsuited to the serene backdrop of peace restored, leaves him 'determined' to be a villain, through courtly fashion's concern with appearances. In Webster's *The White Devil* Francisco laments: 'That's the misery of peace. Only outsides are then respected' (5.1.117-18). Richard's announcement to himself that he will take up the role of villain suggests both his social isolation and the double nature of his use of the word 'determined'. In similarly ambiguous terms, Bacon discusses to what extent a deformed person's appearance relates to inner state, implying there is accordance, but that this is not innate. Instead it is caused by the deformed person's wish to take revenge on nature and to turn back on society its 'scorn':

Deformed Persons are commonly euen with Nature: For as Nature hath done ill by them; So doe they by Nature...First as in their own Defence, as being exposed to Scorn; But in Processe of Time, by a Generall Habit. ('Of Deformity,' *Essays* 179)

It is the biological form combined with sociocultural customs which constrain each other and doubly constrain Richard, placing into question the extent of individual self-determination, played out between these constraints.

The 'amorous looking-glass' also contains a double meaning. It can be understood as the literal object associated with a lover's desire to make oneself beautiful for the beloved. The rejected Julia in *The Two Gentlemen of Verona* discards her glass along with any care for her appearance: 'she did neglect her looking-glass,/ And threw her sun-expelling mask away' (4.4.144-145). Or it can be understood figuratively as designating one who acts as a mirror. This suggests the coexistence of an indeterminate interchangeability between object, a real mirror, and subject, the beloved. It also leaves the phrase open to suggest both the possibility of a mutual amatory gazing or, as on Richard's disapproving tongue is more likely, a form of extended narcissism: the word 'struts' and the 'wanton' ambling nymph deride the vanity of courtly love. Leontes in *The Winter's Tale* needlessly consumed with jealousy describes his wife and friend with an evident disgust 'as making practised smiles/ As in a looking-glass' (1.2.118-19).

This latter interpretation is added to and juxtaposed with Richard's later soliloquy in which amazement and mockery of the ease at which he's won Lady Anne, especially after killing her husband and her father-in-law, seemingly causes him to revise his earlier subjective perspective of himself:

Upon my life she finds, although I cannot,
Myself to be a marv'lous proper man.
I'll be at charges for a looking-glass
And entertain a score or two of tailors
To study fashions to adorn my body.
Since I am crept in favour with myself,
.....
Shine out, fair sun, till I have bought a glass,
That I may see my shadow as I pass. (1.2.240-5, 1.2.249-50)

Richard has been cast suddenly into an amatory relation, yet remains in soliloquy and pretends to desire its visual equivalent, a looking glass, to confirm his re-evaluation, and to compare with the looking-glass of Anne in which he has found himself 'a marv'lous proper man'. This confirms Maus' comment that Richard's attempts to constitute himself and exclude the 'relational' modes with which he finds himself 'unwillingly entangled' since Renaissance theatre repeatedly presents 'the impossibility of separating them' (53). In *Richard III*, the power of the mirror, like

words, is that it traverses the boundaries between offering a social and a self-referential relationship, so figuring the entanglement of these modes.

This scene also inversely mirrors *Richard II*. The deposed Richard II wishes himself 'a mockery king of snow,/ Standing before the sun of Bolingbroke' (4.1.250-51). Richard III having treacherously obtained power invites the sun, figuratively himself, to shine, so he may admire himself. Before he would but spy his shadow by it, but now he has become a shadow of himself through seeing himself reflected like the sun in her eyes, rather than a shadow through his deformity barring him from mutual reflection. In *King John*, Louis the Dauphin seeing himself reflected in Blanche's eyes, proclaims to his father, the king, that he sees:

The shadow of myself formed in her eye;
Which, being but the shadow of your son,
Becomes a sun and makes your son a shadow.
I do protest I never loved myself
Till now enfixèd I beheld myself
Drawn in the flattering table of her eye. (2.1.499-504)

The 'flattering' quality of love and mirrors resurfaces here, as Louis sees himself no longer as the 'shadow' of his father, his father's 'son' having become a 'sun' in the brightness of her eyes and the 'son' a shadow of his own reflection. However, in *Richard III* his supposed transformation is a satire of the true metamorphosis of love; his self-loathing and narcissistic self-love, are opposite sides of the same egoistic and existential dis-ease. The potential of an empathetic reciprocity is mediated, or constrained, by the make-up of the subjects involved: Richard's psychophysiology in combination with his sociocultural context, results in his reaction to love: to scorn.

Yet, Izaak Walton's similar verdict is that 'love is a flattering mischief' (18), and Overbury describes 'An Amorist' as 'translated out of a man into folly; his imagination is the glass of lust, and himself the traitor to his own discretion' (38). Meanwhile, Bacon elaborates on the relation of love to narcissism, surprisingly finding the former the more reprehensible:

For whereas it hath beene well said, that the Arch-flatterer, with whom all the petty Flatterers haue Intelligence, is a Mans Selfe; Certainly, the *Louer* is more. For there was neuer Proud Man, thought so absurdly well of himselfe, as the *Louer* doth of the Person *loued*: And therefore, it was well said; *That it is impossible to loue and to be wise.* ('Of Love,' *Essays* 40)

The lover, as potentially more of flatterer than oneself, is a theme raised in *As You Like It*, where Rosalind attempts to correct Silvius' over-estimation of Phoebe and Phoebe's vanity fuelled by his fawning adoration of her:

'Tis such fools as you
That makes the world full of ill-favoured children.
'Tis not her glass but you that flatters her,
And out of you she sees herself more proper
Than any of her lineaments can show her. (3.5.53-57)

The lover is her flattering glass, in whose words and eyes her form is drawn better than it is in actuality, verbal and social forms of reflection contrasted to the accuracy of the technological instrument.

Within Shakespeare's mirror-motifs the lover and the beloved are revealed as particularly susceptible to perceptual illusions and therefore are particularly unreliable heterophenomenological guides. Love tends to be figured as blurring the boundaries between one subject and other, which makes the lover incapable of a distanced and critical reflection on the beloved. Although, the incapacity to return love, as in Richard III's case, is what makes him appear a monster, rather than his physical deformity. Still, narcissism, misogyny, an economic logic, and a potentially problematic lack of critical distance, are repeatedly shown as undercutting the possibility of one of the highest forms of extended subjectivity possible: the mutual reflexivity of love.

Conclusions

Shakespeare provides a myriad of diversely angled mirrors which display early modern culture's multiple and ambiguous perspectives, rather than a straightforward mirroring of any one aspect of, or attitude to, the human subject and the world. Nevertheless, the mirror-motifs explored in this chapter focus on issues of humourality, social permeability, and the distance of human natural-born mirrors from God. Issues pertaining to liminality and permeability pervade this chapter, with humans between man and beast, and women between man and beast; whilst conversely lovers conjoin one to another. Liminality and permeability, presented through mirror-motifs, illuminate early modern understandings of human extendibility, hybridity and heteronomy, making evident the anxiety and fascination they aroused. Conventional mirror-motifs used to describe women show that women act as a displacement for, and so highlight, wider anxieties about human nature's

humoural materiality. Yet, Shakespeare's use of mirror-motifs inverts and metamorphoses inherited concepts and images of existing literary and dramatic traditions, reforming conventional frames by inviting the reader or spectator to enter into the imaginative worlds set before them, to react to and interact with a complex variety of roles and perspectives on the human subject and the world.

Shakespeare: Perspectives and Words of Glass

For the mind of Man is farre from the Nature of a cleare and equall glasse, wherein the beames of things should reflect according to their true incidence; Nay, it is rather like an enchanted glasse, full of superstition and Imposture... (Bacon, *Advancement* 116)

Issues concerning to what extent subjective experience is reliable or stable, and to what extent subjective experience can or cannot be shared with, or inferred by other people, and the relation of perception and language to mirrors are explored in this chapter through an analysis of Shakespeare's mirror-motifs. The chapter begins by focusing on various forms of extended subjectivity in *Richard II* and Richard's attempted clinging to a contained and solipsistic view of subjectivity. *Hamlet's* opening scenes echo this view but as the play develops the power of mirrors that fashion people and of words that act like mirrors are revealed. The following section explores early modern concepts of social prosthetic systems primarily in *Julius Caesar* and *Troilus and Criseyde*. A final section explores a number of these themes in 'Sonnet 77'. Shakespeare's works display a fascination with the multiple factors that contribute to what is perceived and experienced by a subject, and between what is perceived and experienced by different subjects and by the same subject within different states and contexts.

Shakespeare's mirror-motifs reflect an early modern understanding of vision and language as tools of revelation and distortion. Joel Fineman's *Shakespeare's Perjured Eye* claims that Shakespeare invented 'a new poetic subjectivity' and that this involved a movement to 'linguistic heterogeneity' from 'homogenous visuality' (1, 18):

Shakespeare substitutes for this ideal and this idealizing characterization of visionary language...a different account that characterizes language as something corruptingly linguistic rather than something ideally specular, as something duplicitiously verbal as opposed to something singly visual. (15)

To demonstrate this shift Fineman makes a contrast between the subject of the possessed eye/ I of the 'young man sonnet sequence, and the subject of the perjured eye/ I of the dark lady sequence; paradoxically, given his argument, both use the motif of the eye. In fact, both vision and language were understood as potentially unreliable.

In the early seventeenth century Galileo was exploring the errors and limits of human vision, as well as of the other senses. Galileo's work implied that nature is organised according to independent laws, to which humans do not have privileged access, with the subsequent need to subject appearances to the scrutiny (Piccolino and Wade 1320-21). Bacon in the opening quote uses a mirror-motif and perceptual terms to explain the inaccuracies of our mental images. Relating back to the authority of Plato and his visual allegory of the shadows in the Cave, Bacon concludes:

So in like manner, although our persons liue in the view of Heauen, yet our spirites are included in the Caues of our owne complexions and Customes: which minister vnto vs infinite Errours and vaine opinions, if they bee not recalled to examination.
(*Advancement* 117)

In the next section Bacon compares as a parallel the 'false appearances, that are imposed vpon vs by words' (*Advancement* 117). As discussed in earlier chapters, the shifting amalgam of psychophysiological, sociocultural and technological factors was understood to contribute to the subject's experience of different worlds. During this period, in addition to the continuation of a medieval focus on the relation of human to divine perspective, there was a new shift in emphasis to the issue of appearance and reality in relation to multiple subjective perspectives, and the exploration of what can and cannot be inferred by a third-person mind about first-person experience, which were explored through increasingly extended conceits.

Uneven Mirrors

The human understanding is like an uneven mirror receiving rays from things and merging its own nature with the nature of things, which thus distorts and corrupts it.
(Bacon *New* 41)

Richard II demonstrates the potential unreliability of the mind; it exposes the fact that the instruments used to make and measure judgements, whether faculties of the brain, the body, other people, language or a mirror, may prove unreliable.

The effect of the passions on the cognitive processes is figured through the use of a perspective glass, a perspective picture, and visual perception. The Queen describing that she senses further sorrow to come, but unable to discern a tangible reason, labours without immediate object:

Some unborn sorrow, ripe in fortune's womb,
Is coming towards me; and my inward soul
At nothing trembles. (2.2.10-12)

Bushy, a favourite of her husband's, attempts to console her pregnant 'heavy nothing' (2.2.32), with a complex conceit intended to demonstrate the perceptual distortions of grief:

Each substance of a grief hath twenty shadows
Which shows like grief itself but is not so.
For sorrow's eye, glazed with blinding tears,
Divides one thing entire to many objects –
Like perspectives, which, rightly gazed upon,
Show nothing but confusion; eyed awry,
Distinguish form. So your sweet majesty,
Looking awry upon your lord's departure,
Finds shapes of grief more than himself to wail,
Which, looked on as it is, is naught but shadows
Of what it is not. (2.2.14-24)

Introspective perception is explained through comparison with visual perception. Bushy begins by describing the way in which one grief appears like many, because sorrow 'glazèd' the 'eye', describing the passions' power over perception; Montaigne comments on the overwhelming effect of passing humours and passions: 'Either the melancholic humour grips me, or the choleric; and at this moment sadness predominates in me by its own private authority, at that moment good cheer' ('Apology' 517). Firstly, Bushy describes grief as a perspective glass that multiplies one into many, causing the appearance of imaginary causes in addition to the real cause. Secondly, he describes it as an anamorphic perspective picture, which when viewed at an angle makes apparent a form out of what looked at head on is only a blur, like the skull in Holbein's *The Ambassadors* portrait. Thus, sorrow's effects are illustrated through a comparison with optical illusions; as in the previous chapters this suggests the use of knowledge about corporeality to understand cognitive processes, and is an indicator of the epistemological blurring between categories that reflect an ontological blurring as its basis.

Allan Shickman suggests both the perspectival tricks described could refer to a perspective picture with horizontal pleats which gazed at from below would reveal one picture, whilst another picture would be revealed by means of a mirror hanging above it ('Perspective' 226). Yet, more convincing is Charles Forker's suggestion that the fact that the first of Bushy's examples would yield false images, whilst the second would reveal a true image through looking 'awry', reflects 'the play's complex symbolism of mirrors that paradoxically reveal both truth and falsity' (490). Further, the use of perspective tricks to figure cognitive processes indicates the

potential unreliability of a human subject's perspective, as well as the uncertainty over whether or not our perspective at any time is or is not reliable and the lack of stable means to measure it against.

Effects of looking 'awry', of perceiving things through the passions, were a topic of concern: how could you know if what you perceived was accurate? In Marlowe's *Edward II*, Gurney remarks on the self-perpetuating effect of the passions on grief: 'Your passions make your dolours increase' (5.3.15). In *Henry V*, the king's desire for Kate makes him see the cities he is conquering 'perspectively' as if he were her breaching her maidenhood: 'the cities turned into a maid – for they are all girdled with maiden walls that war hath never entered' (5.2.295-7). In Webster's *The White Devil* Flamineo tries to convince Camillo of the foolishness of his jealousy, by arguing that like 'spectacles fashion'd with such perspective art', jealousy makes things appear that are not (2.1.101-2). In fact, Camillo's jealousy is well founded. Similarly in *Richard II* the Queen's emotional premonition is proved correct when Green enters immediately after with news of Bolingbroke's armed arrival (and the audience already knew from Act 2 Scene 1 that her fears were justifiable). In early modern humoural theories the 'affections [passions] and the higher cognitive processes – judgement, memory imagination – mutually inform each other' (Rowe 172). So arguably as in Damasio's demonstration of the vital role of emotions in reasoning and social inference, one reading suggested here is awareness that the passions can play an accurate supplementary role, as well as a potentially distorting role, in cognitive processing.

Since this is a play that explores questions of monarchical authority, this scene can be viewed in relation to early modern concepts of the subject as the realm. The political context against which this play was produced, as Maus succinctly describes, involved both 'an old-fashioned aristocratic esteem for inherited status and a new emphasis on the intellectual and practical accomplishments demanded by the recently centralized Tudor bureaucracy' (58). On the one hand, Richard's disregard of the deathbed premonitions of his trusty counsellor John of Gaunt, ranked lower on the political hierarchical scale, contrasts with the Queen's heeding of her passions, which are ranked lower on the epistemological hierarchical scale than reason.. Controversially this suggests that theories which regard emotions (counsellors) as negligible to reason (kings) are flawed. On the other hand, a monarch's susceptibility to influence by inferiors was a familiar source of concern, and in *Richard II* an excuse for an uprising, with the monarchical identity negated by its pliability: 'The King is not himself, but basely led/ By flatterers' (2.1.42-3). Thus, the question of the

reliability of cognitive processes and of their means of supplementation extend into the social and political realm.

Equality of men, and other worldly creations, outside of placing by fortune was being questioned. Donne preaching at St. Paul's made a strong argument for the equality and affinity of God's creations: 'That a flower that lives but a day, is an abridgement of that King, that lives out his threescore and ten years' (*Sermons* 4: 128). Montaigne pointed out that a great president had as much need to stoop from his throne to his toilet as did an artisan: shared human physicality placed in question the mystique of rulership ('Of Repentance' 745). In Webster's *The White Devil*, Francisco, disdains that he should kowtow to the Duke:

I shall never flatter him: I have studied man too much to do that. What difference is between the Duke and I? No more than between two bricks; all made of one clay. Only't may be one is plac'd on the top of the turret, the other in the bottom of a well, by mere chance. If I were placed as high as the Duke, I should stick as fast; make as fair a show; and bear out weather equally. (5.1.105-11)

In addition, the political theology that the born and anointed King or Queen had a 'political body' as well as a 'natural body', as used by Elizabeth to claim that though she was a woman she had 'the heart and stomach of a king', was being simultaneously invoked and eroded, on account of civil and religious strife and disrupted succession lines (1). Meanwhile, contrary views about the nature of monarchical role were circulating. Erasmus, following the mirror-for-princes genre advised on the monarch's need for education and counsel, since a ruler who learnt by experience may cause great suffering, and he pointedly insisted that a ruler should 'prefer to be a just man than to be an unjust prince' (*Education* 19-20). Machiavelli, critiquing this genre and satirising humanist pieties, also advised a prince to educate himself, but it was contrarily in how to appear just and be unjust for the sake of success: 'a ruler especially a new ruler, cannot always act in ways that are considered to be good because in order to maintain his power, he is often forced to act treacherously' (62). Yet, despite their diverse ends, these works by their existence put forward the need of a ruler for extended support systems of advisors and advice manuals.

After relinquishing crown and sceptre to Bolingbroke, Richard remarks that his sight (like the Queen's) is blurred by grief, although he can still make out the traitors around him (4.1.238-39). Then reversing the movement of Bushy's conceit from inward to outward and from one to many, Richard turning his eyes on himself reflexively and introspectively, discovers himself a traitor too, as his natural body

has undone his political one: 'For I have given here my soul's consent/ T'undeck the pompous body of a king' (4.1.239-40). Spurning to look at a page of accusations, he despairingly demands a mirror, retorting that:

I'll read enough
When I do see the very book indeed
Where all my sins are writ, and that's myself. (4.1.263-65)

The subject as readable through a book-like mirror-image, plays on material, linguistic and spiritual analogies. The book-metaphor tempers Richard's refusal to acknowledge the written accusations; it is his subjects' judgement he rejects. Instead Richard seeks a higher form of judgement solipsistically through the reflection of his mirror-image. This recalls the employment of physiognomy as a means of understanding the mind, which involves the idea that the internal is connected with and deducible from the external. Additionally, it recalls Crooke's celebration of dissection as a means to self-knowledge through anatomy, such self-knowledge in turn entailing knowledge of all creation: 'whosoeuer dooth well know himselfe, knoweth allthings'(12). The mirror acts as an objective instrument by which Richard may independently anatomise himself, through the self-knowledge afforded by his face.

Richard seeks mimetic accord between his psychological fracturing and the mirror-image, expecting his facial expression and appearance to mark his emotional turmoil, but instead the glass reflects an unmarked physical appearance:

No deeper wrinkles yet? Hath sorrow struck
So many blows upon this face of mine
And made no deeper wounds? O flatt'ring glass,
Like to my followers in prosperity,
Thou dost beguile me! (4.1.67-71)

The lack of accord between inward and outward, he compares to the misleading guidance of followers, who were a proverbial 'flatt'ring glass'. Attempts to find external validation, through other people or the objective instrument, are rejected as false; knotting together social and physical tools as unreliable, and increasing his reliance on introspection. The failure of visual and social means to provide Richard with validation implies a view of subjective consciousness as inexpressible and impenetrable to others. Yet Richard's sense of himself has changed, and he therefore cannot identify with the face which appears the same as before he was dethroned: if he does not feel the same how can he appear the same? This concern with the

division between his subjective experience and perception do not cause him to doubt his inward perspective, only outward and external ones. Richard's egoism prevents consideration of this possibility; the same flaw that has caused his fall marks his reaction to it.

'A brittle glory shineth in this face./ As brittle as the glory is the face!' (4.1.277-78) Richard's lines as he prepares to smash the glass Richard Barbieri suggests were influenced by some lines by Donne (58-60); yet, surely the mirror's general association with the transience and precariousness of worldly fortune and human embodiment make this too much of a commonplace for any definite connection to be made. For example, Justus Lipsius (quoting Pliny) ridicules self-exaltation given the precariousness of worldly fortune: 'Fortune is made of glasse, who when it shineth brightest, is soonest broken'(179). Richard's speech climaxes nonverbally: '[*He shatters the glass*]' (4.1.288). His electrifying act of breaking the mirror resonates shock. Richard's earlier statement that 'I must nothing be' is cathartically enacted: delivering the Queen's 'heavy nothing', with the shattering into fragments of the mirror representing Bushy's intended conceit rendered awry as the Queen's prophetic perspectival vision is brought to life, with the splitting of one into many (4.1.191).

The animistic association of the mirror-image with the person reflected creates a premonition that prefigures his later death, as Richard adopts the shattered mirror again as a true representation. Richard's momentary identification with the shattered glass, marked by his movement from 'this face' to 'the face' to 'my face', and his caution that the glass is a warning to the 'silent king', applicable either, or both, to Bolingbroke and to his past mirrored self, is shattered by Bolingbroke's realist response to Richard's melodrama: 'The shadow of your sorrow hath destroyed/ The shadow of your face' (4.1.282-83). This polysemantically layered statement implies that his act, the shadow of sorrow, has only destroyed his mirror-image, his face's shadow, suggesting an impotency in Richard's act. It also refers to the topos of a deposed king as a sun become shadow, which also appears in Marlowe's *Edward II*, as the vainglorious Edward in prison reflects: 'But what are kings, when regiment is gone,/ But perfect shadowes in a sunshine day?' (5.1.27-28).

Richard then disassociates himself from the glass and even the very words he speaks:

'Tis very true: my grief lies all within,
And these external manner of laments
Are merely shadows to the unseen grief
That swells with silence in the tortured soul. (4.1.285-88)

Thus Richard has rejected whole and fractured mirror-images, and social, and linguistic means as all incapable of representing his inward experience. This disavowal disturbs an early modern sense of connection between inner and outer, rupturing the system of cosmological analogies, such as remarked on earlier in the play by Richard: 'Uncle, even in the glasses of thine eyes/ I see thy grievèd heart' (1.3.201). Yet Richard's histrionic attempt to reframe himself through a literal mirror or verbal expression fails him as his grief remains seemingly unseen and unheard. The implication is that not only is there an unbridgeable chasm between one subject and another, but also between internal and external and past and present aspects of a subject, since he no longer recognises the visual image with which he previously associated his subjectivity. Richard argues that he is what remains 'within' which is what is omitted by the words, the glass and the fragments: 'my grief' the difference between original and image. The correlation between mental construction of a self and the feeling of emotions as phenomenologically one's own relates Richard's description to the concept of reliable first-person experience. His griefs alone remain solely his possession: 'You may my glories and my state depose,/ But not my griefs; still am I king of those' (4.1.182-83). That view can produce, as is evident here, an anxiety about mirrors, physical expression, language, and other people as providers of extended reflexivity and is accompanied by the belief that only internal processes are constitutive of our subjectivity.

Yet Richard's poignant conclusion, depicting the inexpressibility of grief, surprisingly switches from use of the possessive adjective 'my', to the definite article: '*the* unseen grief' and '*the* tortured soul'. This use of the definite article suggests that despite the supposed undoing of his 'political body', the relation of Richard to himself switches between first- and third-person, between private and public, with his monarchical identification manifesting itself in public performance, a splitting also evident in his self-accusation of treachery. Montaigne exposes the tendency in early modern society to conflate the public and private subject, with clothes, objects and public roles and behaviour replacing the subject:

We cannot distinguish the skin from the shirt. It is enough to make up our face, without making up the heart. I see some who transform and transubstantiate themselves into as many new shapes and new beings as they undertake jobs...an emperor...should know how to find pleasure in himself apart, and to reveal himself like any Jack or Peter, at least to himself. ('Of Husbanding' 941)

Richard II reveals the extent to which this inner subjectivity of Richard is framed by his role as king; as described by Nagel and Montaigne, imagination may be limited by experience, and Richard II's central experience is of acting and framing himself as a king (169). Furthermore, his claim of subjective isolation is undermined by the fact that as he casts around for reference points to capture his experience of grief, he is assisted through social dialogue with Bolingbroke.

Human shaping of ideas by intersubjective discourse is reflected in the nature of drama itself. Although played before a multiplicity of audiences in diverse places and times, each containing a multiplicity of individuals, to the extent that all are embodied human subjects, there exists a certain empathy enabled by shared neurophysiological attributes, which ignites a spark of poignant recognition at Richard's expression of experiencing apparently inexpressible grief. The neuroscientific research considered in Chapter 1 suggests that there is a greater sharing between first- and third-person experience than previously recognised, which further explains the moving power of visual and verbal theatrical enactments. An audience is moved through their mind mirroring Richard's enactment of his experience of grief, although each person's concept of grief is embedded in their own idiosyncratic network of emotional memories. That this is a fundamentally human experience is indicated metadramatically by the fact that it is not Richard II, but an actor who is interpreting the grief described by the playwright and then transmitting it to the audience. In this way human's shared psychophysiology and porous intersubjective boundaries contribute to the dramatic power of theatre upon spectators.

Richard's social extendedness is also denoted by his emotionally entwined relationship with his wife. In a parallel scene to the shattering of the mirror, there is a moving portrayal of the division of Richard from another aspect of himself, a connection which he spells out:

Doubly divorced! Bad men, you violate
A twofold marriage, 'twixt my crown and me
And then betwixt me and my married wife. (5.1.71-73)

Richard's equation of his kingship to his union with his wife, is followed by he and his wife's return of their hearts to each other via a kiss. They have been transposed in each others' breasts, but the Queen fears she will kill him from broken-hearted grief at their parting. Emotions are figured as socially extended, suggesting a subjectivity which stretches beyond skin boundaries; as in Kosslyn's concept of social prosthetic

systems. Richard's final parting with the queen prefigures the silence of death: 'The rest let Sorrow say' (5.2.102).

In the penultimate scene, Richard attempts to recreate the 'little world' of England in the 'little world' of the prison. Richard addresses an imaginary interlocutor, 'Now, sir', recalling Rumelhart's and his colleagues' contention that externalising through talking to oneself, has the same effect as writing on paper: it assists in the solving of difficult problems, but causes a blurring between 'external' and 'internal' since 'we ourselves produce the external representation' (47). Thus this and other dramatic soliloquies can also be interpreted as blurring intrasubjectivity and intersubjectivity, in a verbal equivalent of the extended reflexivity of mirror-images, at once transitive and reflexive. Richard peoples the cell with his thoughts, as the pregnant 'swell' of grief in his soul (echoing the queen's) bears offspring:

My brain I'll prove the female to my soul,
My soul the father, and these two beget
A generation of still-breeding thoughts
And these same thoughts people this little world
In humours like the people of this world. (5.5.6-10)

Humoural physiology, man-as-microcosm, intellectual compared with physical conception, and a multiplicity of internal cognitive agents: these are all concepts explored in this thesis that are evident in the above extract. The multiple cognitive offspring of his brain are mirror-images of himself: 'Thus play I in one person many people' (5.5.31). He solipsistically imagines a world populated by himself, which is both the Queen's many in one, as well as the one into many of the shattered mirror, and the relation of king to people. Yet, the type of extendedness Richard now craves can only be attained through death. George Wither's echoing of Richard's lines in describing his own picture as 'but the Shadow of a SHADE', makes clear the type of extendedness sought by Richard:

For, ev'n our living Bodies, (though they seeme
To others more, or more in our esteeme)
Are but the shadowes of that Reall-being,
Which doth extend beyond the Fleshly-seeing;
And, cannot be discerned, till we rise
Immortall-Objects, for Immortall-eyes.
Our Everlasting-Substance lies unseene,
Behinde the Fouldings, of a Carnall-Screene...(Collection sig. A4r)

Richard, having lost his public role and separated from his wife, shrinks his concept of himself to an inner self only indirectly observable by others. Tragically he only wants to play king, and his Christ-like martyrdom releases a joyful exclamation on his triumphant rise to the heavens:

Mount, mount, my soul; thy seat is up on high,
Whilst my gross flesh sinks downward, here to die. [He dies.] (5.5.111-12)

Richard's climactic ascension breaks down any idea of an early modern subject as limited to a contained individual, yet, the only way to achieve the purity and autonomy Richard seeks is outwith the embodied body and humours: through death. The division of Richard's soul from his fleshy embodiment is all that can finally accomplish his ambition for a proprietary consciousness and transcendence.

First- and third-person phenomenologies' reliability is questioned by *Richard II*, suggesting particular forms of this issue that emerged from the early modern context. This is a play which compares multiple forms of reflexivity: technological, social, linguistic, biological, psychological. Richard's rejection of language, the technological instrument of the mirror, and social mirroring in his claim to a proprietary phenomenological consciousness that is not communicatable through any outward shows is brought into question by the framing of his thoughts through discourse and by the dynamic of theatrical spectacle. Though Richard is intersubjectively extended through his relation to his wife, and intrasubjectively multiple by the mass of cognitive offspring he imagines peopling his microcosmical frame, his death alone seems to bring the regal, fixed and monolithic subjectivity he desires.

'Mark and Glass, Copy and Book'

He was indeed the glass
Wherein the noble youth did dress themselves
.....
So that in speech, in gait,
In diet, in affections of delight,
In military rules, humours of blood,
He was the mark and glass, copy and book,
That fashioned others. (2H4 2.3.21-22, 2.3.28-32)

One of the earliest and most conventional types of metaphorical use of the mirror in English is the ideal mirror; it functions as an image of how you should be, which by contrast with how you are, didactically invites virtuous self-improvement (Graves

79-80). Hamlet's metamorphosis from courtly ideal into critical mirror is the primary focus of this section. This begins with discussion of conventional courtly ideal mirrors, followed by an exploration of Hamlet's rejection of the superficial shows connected with such mirrors. Later, Hamlet's conversion to the potential usefulness of 'outward shows' produces his transformation into a critical mirror. Several of the mirror-motifs in *Hamlet* employ notions of the extended mind, extended subjectivity or reflexivity as a means of understanding the processes at work in the human mind and world.

Ideal mirrors were generally human subjects depicted as sharing a function with a technological instrument. Reflecting class bias, the ideal mirror was commonly used to describe royalty or nobility: thus, in various Shakespeare plays: Henry the Fourth's 'wisdom was a mirror to the wisest', Salisbury is the 'mirror of all martial men', and Buckingham is the 'mirror of all courtesy' (3H6 3.3.84; 1H6 1.6.52; H5 2.1.54). It is an inversion of the normal function of the mirror imitating the subject; instead the viewer should imitate the mirror. Yet, this follows the dynamic of customary courtly measures to improve appearance courtesy of the feedback of a visual supplement, the mirror. As in Stephen Kosslyn's theory of social prosthetic systems other people act as an extension of our subjectivity and mind through providing a means of reflection, and supplementing the means through which feelings, thoughts, words and actions are formed and analysed. In the opening quote, the ideal mirror is described as having 'fashioned' others who would 'dress' themselves by it, through outward and inward imitation; imitating ways of talking and gesturing, their humours and affections. The listing together of 'glass' and 'book', reflects a recurrent epistemological slippage between these two technologies as innovative providers of images for reflection, as in Richard II's comparison of his mirror-image to a book (4.1.264).

Hamlet is a mirror, and his play and words are piercing weapons: this is the profound paradox at the end of *Hamlet*. For in Act One Scene Two, Hamlet rejects the truth of images, shows and words, emphasizing the unutterability of the grief that lies within:

Seems, madam? Nay, it *is*. I know not 'seems'.
'Tis not alone my inky cloak, good-mother,
Nor customary suits of solemn black,
Nor windy suspiration of forced breath,
No, nor the fruitful river in the eye,
Nor the dejected haviour of the visage,
Together with all forms, moods, shapes of grief,
That can denote me truly. These indeed 'seem',

For they are actions that a man might play;
But I have that within which passes show,
These but the trappings and suits of woe. (1.2.76-86)

In the drive to find in Hamlet a 'modern subjectivity' the speech above is an oft quoted fragment of text; yet whilst the tendency to project current psychological and philosophical trends upon Hamlet has been well catalogued, perhaps more interesting is Hamlet's capacity to absorb these variant readings (De Grazia section 1-22; Bynum and Neve 289-304). Jones and Stallybrass, in their study of the constitutive function of clothes in the early modern period, point out that even here Hamlet's words are "'Tis not *alone* my inky cloak' (3). Furthermore, whilst Hamlet comments that external shows might be played hypocritically, he also says they 'can denote me truly'. Hamlet's distrust of outward appearances, as with Richard II, initially suggests the superiority of a first-person phenomenology, since beyond show and incapable of being played or seeming, at the same time as these shows ability to denote truly as well as falsely is acknowledged; this single extract demonstrating the polyvalent potential of Shakespearean discourse and its invitation of variant interpretations that touch on philosophical issues.

After the opening revelation by Hamlet's father's ghost that he was murdered by Claudius, Hamlet assumes a madness, whose poignancy lies in the fact that it cannot be certainly ascertained is as feigned as he protests. He rages against Ophelia, who uses the commonplace ideal mirror-motif in contrasting his current state with the past Hamlet:

O what a noble mind is here o'erthrown!
The courtier's, soldier's, scholar's eye, tongue, sword,
Th' expectancy and rose of the fair state,
The glass of fashion and the mould of form,
Th' observed of all observers, quite, quite, down! (3.1.149-153)

Ophelia describes the courtly ideal from which Hamlet has been metamorphosed by grief and desire for revenge. Yet in the first half of the play Hamlet is 'unpregnant of my cause' (2.2.545), in refuge and contrast to the ambitious corruption of the court in its fetid fecundity: "'Tis an unweeded garden/ That grows to seed; things rank and gross in nature/ Possess it merely' (1.2.135-7). Yet is Hamlet really describing the court or himself? Burton describes that the lack of exercise and solitariness of a scholar, such as Hamlet, made him particularly susceptible to melancholy, for as 'fern grows in untilled grounds, and all manners of weeds, so do gross humours in an idle body' (1.2.2.6). Hamlet's disenchantment with the gap between 'seeming' and

'being' haunts and incapacitates him; particularly indicative is his dismissive retort to the verbose Polonius' enquiry of what he reads: 'Words, words, words'. Lacan's complaint that alienation from language leads to madness and simply thickens the 'Language barrier' is called to mind ('Function' 44-45). In word play with Rosencratz and Guildenstern, the repartee plays on language's fertile indeterminacy making it appear dangerously without fixed referent as well as flexibly polysemous (2.2.220 ff.).

Yet, near the end of the play, when Hamlet satirises a subsidiary of ideal mirrors, his scorn is directed by a different impetus. Hamlet mirrors the courtier Osric's praise of Laertes:

But, in the verity of extolment, I take him to be a soul of great article, and his infusion of such dearth and rareness as, to make true diction of him, his semblable is his mirror, and who else would trace him his umbrage, nothing more. (5.2.102.10-14)

This type of conceit occurs in Bacon, for example, where he refers to Elizabeth I, as 'a Prince, that if Plutarch were now aliue to write parallels, would trouble him I thinke, to find for her a parallel amongst women' (*Advancement* 42-43). Kiernan notes this is a hyperbole derived from North's translation of Plutarch's *Lives*: 'I compare *Epaminondas* to himselfe' (North 241), but it had become a commonplace flattery. Cox, for instance, in the prefatory material to John Davies of Hereford's *Humours Heaven on Earth* (1605), proclaims: 'IN all thy Writings thou hast such a Vaine,/ As but thy selfe thy selfe canst counterfet' (sig. A4r). The conceit that someone was so superlative that they were inimitable, with no likeness other than that in their mirror, suggests technological mirroring is superior to the social variety, and it occupies a first-person phenomenological basis, which claims the impossibility of a living parallel. Judith Butler offers a useful insight into the link made between singularity and the claim to authenticity with which *Richard II* draws to a close and that *Hamlet* pries open: 'The notion of singularity is very often bound up with existential romanticism and with a claim of authenticity' (*Giving* 34). Hamlet's insistence on the inexpressibility of Laertes' superior inimitability could seem a continuation of his earlier phenomenological sentiments, were they not laced with heavy irony. Thus, whilst Hamlet's disdain of courtly rhetoric remains the same, the satirical nature of this comment makes evident that he is now calling into question the authority of such claims that he began the play with for inimitable inwardness. Hamlet's attitude to words and to mirrors is both transformed and cause of transformations in the course of the play.

Hamlet's rejection of being a living courtly mirror is linked to a wider discontent with ideal mirror-motifs, which had become a subject for merriment, at the same time as their genuinely laudatory application continued to be widespread. In Beaumont's parody *The Knight of the Burning Pestle* (1613), Rafe's reading leads him to reminisce nostalgically about the days of chivalry, when princesses would say "All-happy knight, the mirror of all such as follow arms" (1.225-28). Zitner notes contemporary enthusiasm 'for chronicle kings, fantasy princes and merchant worthies; for adventure, marvel, pomp, slapstick, horror, and decent sentiment' (28). Beaumont satirises these contemporary yearnings for the heroic with his mock-heroic play. Rafe is inspired by his reading to turn knight and be the first grocer-errant, a la Don Quixote; in fact, in an opening epistle Beaumont employs the book-child metaphor to claim kinship with and precedence over this rival burlesque: 'Perhaps it will be thought to be of the race of Don Quixote. We both may confidently swear it is his elder brother above a year, and therefore may (by virtue of his birthright) challenge the wall of him' (52). Thus, theatrical satirisations of conventional mirror-motifs were emerging.

Furthermore, courtly mirrors were inextricably bound up with the vanities of court life. In *Henry V*, whilst King Harry is lauded as 'the mirror of all Christian kings' (2.Chorus.6), since the term 'glass-gazing' was in itself an insult (*Lr.* 2.2.15-16), in his elegant show of unpretentious modesty he mentions along with the fact that he 'cannot gasp out my eloquence' (at the very time of doing so) that he 'never looks in his glass for love of anything he sees there' (5.2.139-45). Conversely, in *The Tempest* Miranda's declaration that she does not know a women's face, 'Save from my glass mine own', suggests not vanity, but innocence of the feminine wiles of court life, which has preserved the otherworldliness Ferdinand admires (3.1.50). Paster notes a readiness to 'alter body, mood and behaviour' was socially expected, yet it is flatterers who Jonson describes that 'Laugh, when their patron laughs; sweat, when he sweates;/ Be hot, and cold with him; change euey moode,/ Habit, and garbe, as often as he varies' (*Humoring* 194; *Sejanus* 1.1.33-35). Those who employ courtly mirrors are a source of ridicule, both despite and because of the social necessity that the lower person in the hierarchy of any given company becomes what is described in *Timon of Athens* as a 'glass-faced flatterer' (1.1.59). This also suggests that for most, adaptability in mirroring as well as being mirrored was required in early modern urban and courtly society, along with a dose of tactful discrimination. Recalling the letter by the maidservants discussed earlier, Earle describes that a 'Serving Man' is 'one of the makings up of a gentleman as well as his clothes, and somewhat in the same nature' and regards 'it a part of his duty to be

like him' (191). Socially extended reflexivity and subjectivity was both in operation and acknowledged, if not always approved of, in early modern society.

The town of Tarsus in *Pericles* epitomises the vain self-admiration produced by the increasing emphasis on appearances in courtly and urban life: 'Whose men and dames so jettied and adorned/ Like one another's glass to trim them by' (4.26-7). Comically this redirects back at their urban and courtly audiences the scornful comments made about the players of theatres: 'All their care is to be like Apes, to immitate and expresse other mens actions in their own persons' (Lupton 82). James Knowles suggests that whilst the 'ape/poet' metaphor works to distinguish between ape and man, the performance of imitation involved in acting 'disconcertingly raises the possibility that aping as an action, especially when staged, is actually and simply being an ape'(143). The actor appears to threaten humanity's constitutive supremacy, by its reflection of our inherent hybridity. The profound questions and tensions about human liminality and heteronomy raised by mirrors and theatrical players are because they both figure a representation of living forms, and are potentially revelatory of the working of our interior and social worlds. The evident scorn of aping-mirrors reflects anxiety over the extent to which not just actors, but human subjects in society act as mirrors (which necessarily ape) and are therefore manipulable, interchangeable and insubstantial. The potential for extended subjectivity and reflexivity to become instead personal and socially extended forms of narcissism, give added reasons for Hamlet's initial throwing down of the socially reflexive role as the 'glass of fashion'.

The turning point in Hamlet is his re-enchantment with words and shows. Struck by the ability of a player only 'in a fiction' to imitate emotions so faithfully tears are in his eyes, his voice broken and 'his whole function suiting/ With forms to his conceit', Hamlet remonstrates with himself for being a 'dull and muddy-mettled rascal' in his delay seeking revenge (2.2.529, 2.2.533-34, 2.2.544). Paster points out that 'mettle' was used to refer to metal and to a person's character, with 'the positive implication of ardour or spirit', and could mean 'any kind of matter', especially 'earthy matter'; therefore Hamlet is describing himself 'as one whose cognitive faculties are literally darkened (muddled) and slowed by the workings of the melancholy humours' (*Humoring* 46-47). Besides, by depicting himself figurally as a dull, muddy and so *unreflective* metal, he also evokes his failure to act as a corrective mirror. Earle's description of the character of 'A Discontented Man' amounts to a mirror-image of Hamlet:

Is one that has fallen out with the world, and will be revenged on himself...He considered not the nature of the world till he felt it, and all blows fall on him the heavier, because they light not on his expectation. He has now foregone all but his pride, and is yet vain-glorious in the ostentation of his melancholy. His composure of himself is a studied carelessness, with his arms across, and a neglected hanging of his head and cloak...He quarrels at the time and up-starts...His life is a perpetual satire, and he is still girding the age's vanity...(150)

Thus, it is in fact through his humoural disposition that Hamlet's melancholic apathy, his unmannerly rebuttal of society's vanities, and his urge to reveal to the world its corruption emerges.

Yet startlingly Hamlet's muddiness, enflamed by the player's performance, like the dust and sand Howell describes transubstantiated by the Venetian furnaces, becomes a clear reflecting glass. 'About, my brain' he instructs himself, immediately setting to work on his plan for a play (48; 2.2.565). In her study of melancholy, Radden comments that Freud's intuition in 'Mourning and Melancholia' that the melancholic had a keener eye for the truth is borne out by empirical studies (157; see also Taylor and Brown 197). John Marston provides an early modern instance of this belief as in *The Scovrge of Villanie* (1598) he calls on heartfelt melancholy to assist him: 'Ingenuous *Melancholy*, I implore/ Thy graue assistance' (sig. B5r). Since this descends from the classical tradition connecting melancholy with genius discussed earlier (Screech 35), Hamlet's startling melancholic insights, despite and because of his unbalanced nature, would make sense to an early modern audience at the same time as raising the troubling question of the extent of the role of humours in determining cognitive processes and human subjects. Hamlet's girding of the age's vanity is both frustrated and contributed to by his melancholic disposition, which is then elevated and impassioned by the moving capacities of the dramatic play into action. The inspiration of the players marks Hamlet's realisation that although courtiers use fictions to cover the truth, Hamlet can use the fiction of the play to uncover a truth: words are a practical means to truth as well as to seeming.

Planning the presentation of a play, which reveals in fictional form Claudius' murder of his father, Hamlet asserts 'I'll observe his looks/ I'll tent him to the quick' (2.2.573-4); a 'tent' was a surgical instrument used to examine or cleanse a wound. Paster comments on the 'purgative discourse' of the play (*Humouring* 55). Indeed, Renaissance satire was commonly described as a scourge or scalpel to probe and purge the patient as in Stubbes' *Anatomy of Abuses* or Marston's *Scourge of Villainy* (and also often as a mirror, as for example in Baldwin's *Mirror for Magistrates*). Davies of Hereford versifies the need for the equivalent to piercing physical wounding for moral remedy:

Yee oft haue heard, that Sores quite mortified,
(If euer they be cured as they ought)
Must haue sharpe Corrasiuues thereto appli'd,
Else one sore part may bring the whole to nought ('Humours' 29)

In *A Defense Of Poesy*, written in the 1580s, Philip Sidney describes the virtue of tragedy as that it 'openeth the greatest wounds, and showeth forth the ulcers that are covered with tissue; that maketh kings fear to be tyrants, and tyrants manifest their tyrannical humours' (230); depicting figural violence as a necessary curative to strip away the coverings of habit in a critical probing way. *Troilus and Cressida* uses a similar metaphor that clarifies the meaning here, as Hector explains: 'modest doubt is called/ The beacon of the wise, the tent that searches/ To th' bottom of the worst' (2.2.14-16). As in *Richard II*, physical terminology is adopted to describe the expositional effects of mirrors and words, which are here deployed to reveal vice and 'catch the conscience of the King' (2.2.582). Thomas Beard compares the responsibility that players 'set aloft' have to present 'a glasse of vertue' with the responsibility of a prince: 'Like Prince, like People; insomuch that every one desireth to frame himselfe according to the humour of his superiour' (3). Hamlet practically demonstrates and applies early modern belief that a play, a staged exposition of 'as if', provokes the passions, assists the mind in making imaginative leaps, and exposes to the viewer's his own nature and moral bearing.

Hamlet's direction to the players of *The Mousetrap* also uses physiological analogies to convey their performance's purpose:

Suit the action to the word, the word to the action, with this special observance: that you o'erstep not the modesty of nature. For anything so overdone is from the purpose of playing, whose end, both at first and now, was and is to hold as 'twere the mirror up to nature, to show virtue her own feature, scorn her own image, and the very age and body of the time his form and pressure. (3.2.14-22)

The emphasis on being 'natural' in Hamlet's directions to the players suggests that the dramatic mirror Hamlet is holding up to the court, an inversion of the fashionable glass, is intended to be seen as trustworthy. Walton claims his depiction of Donne to be 'the Authors Picture in a natural dress, which ought to beget faith in what is spoken' (Walton 11). In a similar manner, Overbury's describes 'An Excellent Actor': 'He doth not strive to make nature monstrous; she is often seen in the same scene with him, but neither on stilts or crutches...By his action he fortifies moral precepts with examples' (83-84). Thus, Hamlet here employs early modern literary

convention in which emphasis on naturalness, often tied to expressions concerning the lack of artificial showiness, are made as guarantors of truthfulness and morality.

Moreover, Hamlet describes the play as a corporealisation of the sociocultural era, a making of it graphic, sinewy, through its performance by players. His is an image of theatre as possessing a gestural and linguistic dynamics that images the personified society as a physical structure, an encompassing stage-as-world, and a visual mirror akin to the aspirations of early modern anatomised images. In *Every Man out of his Humour* Jonson contemporaneously uses a similar metaphor with explicit anatomical references:

And to these courteous eyes oppose a mirrour
As large as is the stage, whereon we act:
Where they shall see the times deformitie
Anatomiz'd in euery nerue and sinew,
With constant courage, and contempt of fear. (Ind. 118-122)

Self-knowledge and knowledge of the world are produced through a corporeal-like dissection of the world-as-man. Hamlet's play's intention is to produce a reaction, an awareness and reflexive thoughts, to validate and interrogate the structure of the society it reflects, through the double enactment of words and gestures. The theatrical spectacle recalls McNeill's idea of language as 'imagery-language' dialectic, the imagery provided by gestures embodying meaning through physical enactment in co-expression with speech, powerfully doubling the message (92).

The dramatic performance catches the audience's conscience by creating a reflective surface, placing the audience face to face with recognisable moral issues placed within an imagined setting. Bernard Spivak points out the use of such apologies as play prologues a generation before *Hamlet*, on which basis Spivak argues that in *Hamlet* as in early morality dramas: 'To "catch the conscience" of the audience is the professed aim, just as it is implicit in the very nature, of every morality play' (104). What is significantly different though is that in *Hamlet*, this takes place within the play itself rather than as an 'objective' prologue, with the subjective holder up of this mirror, the melancholic Hamlet. Furthermore, I think Shakespeare has pointedly worked into the play a defence of theatre and playwrights by satirically inverting Gosson's influential rebuking of 'Poets in Theaters' who 'wounde the conscience' (14). Gosson continues that whilst cooks and painters 'extendeth' their arts only as far as the 'outwarde sense, which is common too vs with brute beasts', the dramatist is much more dangerous, as 'these by the priuie entries of the eare, slip downe into the hart, & with gunshotte of affection gaule the

minde, where reason and vertue should rule the roste' (14-15, 15). Figured on the stage in Hamlet's play is the enactment of Claudius' murder of his brother by pouring poison in the ears, with the play not the perpetuation but the uncovering of poisonous vice: if it wounds it is to *catch* the conscience.

Hamlet sceptically transforms rather than throws down the mimetic potential of drama, as Hamlet finally does his personal role as mirror. Hamlet's play provides evidence of Claudius' guilt, through causing him to abruptly rise in protest, with Hamlet almost gleeful to catch Claudius with 'false fire', corresponding to Claudius use of guilt-concealing outward shows (3.2.244). Mary Crane suggests that in *Hamlet* 'the only successful performative utterances are those that have behind them not sincere intentions but rather power itself' (150). However, against this is not only Hamlet's use of the play, but his use of written words to cause Rosencrantz and Guildenstern's deaths, suggesting the effectiveness of language by itself (albeit here through the false appearance of having legitimising power). Similarly Jane Tylus in an analysis of early modern European drama's move away from notions of mirroring, argues that in *Hamlet* the theatre's 'revelations are revealed as only gratuitous, prurient and invasive rather than efficacious, effecting no narrative resolution' (270). Yet, the power of mirror-plays is shown not only by Claudius' inability to sit through the play, but even more by that fact he is moved to attempt to confess his sins privately. The irony is that Hamlet does not murder him for fear his confession will take him directly to heaven, not realising it is unintentionally another of Claudius' performances without substance: 'My words fly up, my thoughts remain below./ Words without thoughts never to heaven go' (3.3.97-98) Habit has transformed his disposition, in the same way that the theatrical spectacle has moved him to attempt prayer. This early modern belief dates back to Aristotle: 'It makes no small difference, then, whether we form habits of one kind or another from our very youth; it makes a very great difference, or rather all the difference' (2.1.1103b). Davies of Hereford simply states 'Custome is another nature', whilst Rogers elaborates 'The minde of a craftie man, by practise is hardened, euen as the hande of a worke-man by great labour' ('Humours' 33; B5r; see also Bacon, 'Of Nature' *Essays* 162). Thus the parallel between physical and mental shaping through performativity is evoked.

Hamlet's personal presentation of a didactic mirror to his mother in her closet re-enacts the holding up of a truthful mirror by a man himself awry. As Polonius, remarks earlier in the play: 'How pregnant sometimes his replies are – a happiness that often madness hits on, which reason and sanity could not so prosperously be delivered of' (2.2.207-9) Hamlet's stated purpose echoes his directions to the players,

now directed at the blameworthy party, rather than the portraying players, whose position he occupies, and at an individual soul rather than an entire age:

You go not till I set you up a glass
Where you may see the inmost part of you. (3.4.19-20)

Paster remarks that Hamlets' intention to 'speak daggers' and the Queen's comment on his 'words like daggers' suggests a repetition of the play's purpose in the desire for 'a psychological wounding...to purify a mother contaminated by sexuality' (3.3.366; 3.4.85; *Humoring* 55) Through the presentation to her of pictures of Hamlet's father and uncle Claudius, along with Hamlet's damning accusation of lustful adultery, the Queen appears brought to repentance:

O Hamlet, speak no more!
Thou turn'st mine eyes into my very soul,
And there I see such black and grainèd spots
As will not leave their tinct. (3.4.78-81)

The Queen's reaction is an internalisation of the format presented to her by Hamlet's proffered extended reflexivity, as she discovers within the vice by which her soul, herself-as-mirror, is tainted and spotted.

This scene forcefully conjoins two related mirror conventions. The immediate reading is that Gertrude's soul is tainted by vice, and she confesses to herself her guilt: 'To my sick soul, as sin's true nature amiss is' (4.5.17). The morality tradition of self-realisation through use of a mirror appears as late as Barnabe Barnes' revenge tragedy, *The Devils Charter* of 1607 (Carpenter *Masks* 274). *The Devils Charter* portrays Lucretia Borgia viewing her physical disfigurement by a poisonous lotion, that soon effects her death along with her confession: 'Who painted my faire face with these foule spots,/ You see them in my soule deformed blots' (sig. H2r). Lucretia's death is visually and literally caused by her sin, her vanity, as the lotion is presented to her as a beautifying potion. Yet, an additional reading is suggested. The traditional description of the Virgin as a 'Mirroure without spot' implies virginity as well as purity (Grabes 162). Paster's reading of this scene in *Hamlet*, as referencing her sexual crime, is supported by the glass-womb topos, for the tainting and spotting of Gertrude's glass also represents the sexual and corporeal nature of her sin. Though unlike *The Devil's Charter*, in *Hamlet* Gertrude's contrition is produced through Hamlet acting as mirror, rather than by an actual mirror, with his words visually supplemented by pictures. This scene again makes a case for the potential of language and images to transform subjects.

Hamlet and his play act as critical moral mirrors, and are efficacious without any other legitimising power than words, gestures and pictures. Significantly, they act as a true mirror, despite and because of the melancholic and socially outcast position of the wielder. Drama is shown as a subjective mirror that reflects back the human subject and world, and like mirroring in the world it is a practical fiction with the potential to tell a truth. *Hamlet* explores both notions of continuity and disparity between theatrical spectacle and human world, with the spectacle reflecting a world in which successful or just resolutions are not certain. Plays are depicted as extended emulatory circuits that combine social mirroring mechanisms with the fluidly intersubjective and intrasubjective nature of language and the medium of physical gesture. Plays are shown as allowing us space to stand back and reflect on human life as embodied and morally engaged spectators, and as freeing the imagination to explore different perspectives, while simultaneously impassioning our minds. Rather than the mutual exclusivity between seeming and being that seems initially suggested, *Hamlet* presents a two-way interaction between the mind and subject's employment of images, words and actions and their reflexive counter-shaping. As in the extended mind theory, the mind and world are shown as reciprocally constitutive.

Reflecting Eyes, Voices Echoing

In the following pages our attention turns to a wider exploration in Shakespeare of the relation of language to mirroring, examining scenes in several plays in which references to visual reflections are deliberately employed by verbal echoers, and which explore the relation of third-person mirrors to first-person accounts of oneself. This leads into an investigation in *Julius Caesar* of how Cassius is transformed, who begins by duplicitously offering himself as a mirror to Brutus, but ends as a true mirror to him. Finally this part closes with a brief look at how a subject's words can reflect back on oneself, rather than at the intended other, and how the body, as well as words, plays a role in social mirroring.

Language, like mirrors, is one of the ways in which we make the invisible visible, as both are cognitive props that allow us a means to reflect on ourselves. Shakespeare reveals the intersubjective mirroring of words in discourse, using a technique in which one character turns another's words against him, and in some cases this is highlighted by use of the image of a mirror or reflective surface:

PETRUCCIO	Why, here's no crab, and therefore look not sour.
KATHERINE	There is, there is.
PETRUCCIO	Then show it me.

KATHERINE Had I a glass I would.
 PETRUCCIO What, you mean my face?
 KATHERINE Well aimed, of such a young one. (2.1.226-30)

In *The Taming of the Shrew* Kate mimics the subjective perspective of Petruccio back at him revealing the lack of authority of his perspective over hers. Just as the glass being figurally held up is not neutrally placed, so the biased position of the signifying subject is signalled by the mirror-like rebounding of Petruccio's words back at him. This highlights the potentially problematic lack of objectivity in intersubjective forms of reflection, by one person of another and by one group against another. This can be related to Greenblatt's discussion of the similarity of rhetoric levelled by Catholics and Protestants against each other, as they attempted to establish their own total authority, as shown in this quote about More and Tyndale:

For just as More charged that the Protestant had fashioned an unreal church out of their own fevered imagination, Tyndale characteristically reverses the charge and asserts that at the heart of the Catholic Church...here is nothing else than man's own imagination idolatrously worshipped. (*Renaissance* 112)

Thus, reverse mirrorings of discourse, using as a weapon concerns over the human tendency to self-project, were circulating in early modern religious conflicts. Shakespeare explores such issues on the personal scale and with humour. *As You Like It* has a similar scene of verbal mirroring in which upon Jaques' oblique insult that he was looking for a fool when he found Orlando, Orlando responds that he's drowned in the brook, where if he looks he'll find him; so, once again the reflecting back of the words is highlighted by the visual figure, which demonstrates that the subject is in fact describing themselves and not the addressed (3.2.261-265). Philip Massinger in *A New Way to Pay Old Debts* (1633) later imitates this technique:

WELLBORN: Rogue what am I?
TAPWELL: Troth durst I trust you with a looking-glass,
To let you see your trim shape, you would quit me,
And take the name yourself. (1.1.6-8, 507)

Thus the glass proffers to rebound the image with the words, in these openly antagonistic relations figuring of visual and use of verbal reflexivity.

The more serious philosophical implications of visual and verbal reflexivity, in terms of another person offering to act as an extension of the mind, are explored in *Troilus and Cressida*:

That no man is the lord of anything,
 Though in and of him there be much consisting,
 Till he communicate his parts to others.
 Nor doth he of himself know them for aught
 Till he behold them formèd in th' applause
 Where they're extended – who, like an arch reverb'rate
 The voice again; or, like a gate of steel
 Fronting the sun, receives and renders back
 His figure and his heat. (3.3.110-118)

Bacon makes similar analogies between reflections by one's senses and by objects, and notes the resemblance of the eye to the mirror and the ear to echoing places, suggesting that these organs of sense are of a similar nature to bodies which give off sensory reflections (*New* 144). Shakespeare's passage uses the analogy between visual reflexivity and verbal echoing in order to offer an explanation of self-knowledge as working via an extended reflexivity. The reflected beam of knowing is described as operating intersubjectively, through the reflection of other subjects, and this precedes the intrasubjective possession and understanding of oneself.

John Davies would have taken issue with this claim, since in *Nosce Teispsum*, Davies questions whether the mind is like an eye that sees other things but not itself, before conversely concluding that 'the minde can backward cast/ Vpon her selfe, her vnderstanding light' (5). However this independent means of self-reflection is undermined by the fact that the mind (or soul) is 'so corrupt, and so defac't/ As her owne image doth her selfe affright' and instead tends to turn its gaze outwards (5). This is hardly a reassuring image of self-reflexivity, although Davies argues that the mind can correct misleading sensory information, knowing that when sweet things taste sour it is due to the tongue's false judgement; thus, Davies offers the mind as a more reliable means of measurement than sensory faculties, although even in his depiction the mind or soul is itself problematically damaged. Conversely Crooke argues that it is precisely because the soul 'can no more be described by vs, then our eye is able to see it selfe' that we should look instead to the body and so 'behold the liuely Image of all this whole Vniuerse, which wee see with our eyes (as it were) shadowed in a Glasse'; thus, for Crooke the human body becomes St. Paul's dark glass (4). Whereas, Shakespeare in this passage explores the possibility of human social reflexivity as the means by which humans can overcome the inability of the mind to encompass itself. This follows most closely the original meaning of the passage in Plato's *Alcibiades* in which the inability of the eye to see itself other than in the mirroring pupil of another's eye is compared with the need that 'if the soul... is to know itself, it must look at a soul' and there see itself reflected (133b).

Another similar passage occurs in *Julius Caesar*, which in the context of the play indicates the problematics of socially extended reflexivity. Cassius intent on persuading Caesar's protégé Brutus to participate in Caesar's assassination attempts to convince him of the necessity of socially extended reflexivity:

CASS. Tell me, good Brutus, can you see your face?

BRU. No, Cassius, for the eye sees not itself

But by reflection, by some other things.

CASS. 'Tis just;

And it is very much lamented, Brutus,
That you have no such mirrors as will turn
Your hidden worthiness into your eye,
That you might see your shadow

.....

And since you know you cannot see yourself

So well as by reflection, I, your glass,

Will modestly discover to yourself

That of yourself which you yet know not of. (1.2.50-60, 1.2.69-72)

Cassius attempts to convince Brutus that another person must act as a mirror in order to show you yourself truly through an extended reflexivity, as in *Troilus and Cressida* and *Richard II* perception is used to speculate about introspection. The limits of perception, the inability of the face and the eyes to see themselves other than through the process of reflection, is used to suggest the limits of introspection, of a parallel psychological inability of the subject to apprehend its own qualities, without a form of socially extended reflexivity. The easy movement between outward and inner, social and subjective, visual and psychological capacities seems a habit of thought enabling rather than requiring a cognitive leap. Cassius proposes his 'extrospective' perspective as a necessary supplement to Brutus' introspection, also suggesting the way in which through language our cognitive processes extend out into the world and into other people.

However, the self-interest involved in Cassius' claim to be the bearer of Brutus' true reflection, reveals an extrospective perspective to be problematically situated in its own subjective perspective and motivated by ends that are not necessarily transparent. As Bacon warns of 'I'll-be-your-mirror' offers: 'to be 'speculatiue into another man, to the end to know how to worke him, or winde him, or gouerne him, proceedeth from a heart that is double and clouen, and not entire and ingenuous' (*Advancement* 19). Cassius' attempts to lead Brutus ultimately fail, as although he persuades Brutus to participate in the uprising, Brutus idealistically convinces him not to kill Antony and to let him speak at Caesar's funeral where he rouses the people against them. Instead, it is Cassius who is transformed from his

much-cited statement of self-determination 'The fault, dear Brutus is not in our stars,/ But in ourselves, that we are underlings', to the less-cited admission that subjects are affected by the influences of the world and stars: 'Now I change my mind,/ And partly credit things that do presage' (1.2.141-42, 5.1.77-78). By the tragic end Cassius mirrors Brutus' words in conformity not in coercion:

BRUTUS For ever and for ever farewell, Cassius.
 If we do meet again, why, we shall smile.
 If not, why then, this parting was well made.
CASSIUS For ever and for ever farewell, Brutus.
 If we do meet again, we'll smile indeed.
 If not, 'tis true this parting was well made. (5.3.117-122)

Against his original Machiavellian intentions Cassius ironically becomes in intention the 'true mirror' he claimed to be; more fitting than Bacon's warning by the end is the proverb: 'The best mirrour is an old friend' (Herbert sig. B4r). Although ironically Cassius' 'sight', as he acknowledges at the end was 'ever thick', and is a corporeal equivalent to his limited insight and foresight (5.3.21). That this also brings his downfall in the battle, as he mistakes victory for defeat, is more poignantly wrought even than his assisted self-murder, with the sword that had killed Caesar (5.3.44-45). In *Julius Caesar*, as in *Hamlet* and *Richard II*, the themes of first-person and third-person perspectives are explored through mirror-motifs, with a demonstration that whilst either one may prove trustworthy, so too may either one also prove untrustworthy, and that this variable does not necessarily operate in relation to the steadiness or intentions of the mirrorwielder. Neither a first-person nor a third-person perspective is inherently reliable as a guide, nor are they even distinct, since images of things and echoes of words resonate in our heads blurring boundaries between others and ourselves. This recalls Andy Clark's intuition that boundaries between outward and inward cognitive processes are no greater than those between the various inner looping ones ('Memento's' 16).

In early modern society, as we have seen, an old friend or a lover can be considered as an extension of oneself, rather than as a separate individual: 'his one heart is so parted, that whilst he has some his friend hath all' (Hall 113). Conversely, the self can be divided into multiple agents, and this is also explored through mirror-motifs. In *2 Henry VI* a straightforward antagonistic verbal mirroring with visual mirror-motif occurs:

CLIFFORD: Why, what a brood of traitors have we here!
YORK: Look in a glass, and call thy image so.

I am thy king, and thou a false-heart traitor. (5.1.139-141)

But there is also a scene in which it is against himself that the speaker's words strike:

Enough, sweet Suffolk, thou torment'st thyself,
And like these dread curses, like the sun 'gainst glass,
Or like an overchargèd gun, recoil
And turn the force of them upon thyself. (3.2.331-334)

Queen Margaret describes Suffolk's own curses as ricocheted back at him by their futility.

Humans are not only linguistically permeable; humoural receptivity means that through another's expressions and gestures, as well as through another's words, a subject's sense of self could be radically altered. In *The Winter's Tale* Polixenes on meeting Leontes' servant Camillo realises instantly that his own state has altered:

Your changed complexions are to me a mirror
Which shows me mine changed, too; for I must be
A party in this alteration, finding
Myself thus altered with't. (1.2.381-84), 2894.

Camillo's face bears out Crooke's description that the 'eyes are the discoverers of the mind, as the countenance is the Image of the same' (8-9). Marlowe used a similar technique in *Edward II*, for the description of your fate as written on someone else's face: 'These lookes of thine can harbour nought but death./ I see my tragedie written in thy browes' (5.5.73-74). But here Shakespeare takes it further, with Polixenes suggesting that his subjectivity is transformed by Camillo's alteration towards him, as if he were a mirror in which he sees himself. Hampton explains that the term 'alteration' then signified both a physiological and a psychological shift, due to 'the essential tie between the body and the temperament or psyche...the alteration of the soul and the alteration of the body are mutually interactive and shape each other' (273-74). Moreover, the seam between one person and another is shown to allow dynamic interaction and penetration through the mind and the body of one subject and another, as like the seam between the body and mind it is shown to be a negotiable and porous boundary. Thus, Shakespeare employs mirror-motifs to explore a number of different facets of socially extended reflexivity, fruitfully employing the relation between linguistic and visual reflexivity to suggest the supplementary as well as the problematic nature of third-person perspectives.

Glass, dial and book

...Look how the father's face
Lives in his issue, even so, the race
Of Shakespeare's mind, and manners brightly shines
In his well-turned, and true-filéd lines (65-68)

Ben Jonson's lines in 'To the Memory of My Beloved, the Author Mr William Shakespeare' fittingly echo Shakespeare's own sonnets' description of the mind as extended through the words that it leaves written on a page and the concept that this is a parallel to the extension of a subject through their creation of biological offspring. Within the 'young man' sequence of the sonnets a central theme explored is the benefits and downfalls of a biological glass (a human offspring) versus a textual imprinting of the subject, interweaving concerns about mortality and endurance, and memory and forgetting. In this sequence the shortcomings of both the textual and biological are repeatedly juxtaposed from oscillating perspectives, offering fragmentary solutions that are overturned or undermined by the solutions of other sonnets. Whereas a textual representation lacks direct physical evidence; a biological glass would contain the qualities recreated in living form, yet since living therefore transient unlike the potential immortality of the textual. This section discusses Shakespeare's exploration of these themes in 'Sonnet 77'.

In 'Sonnet 77' the use of a text as a means to supplement the biological mind through providing a preserved self-image, an extended reflexivity, is explored as the young man is advised to commit his excess memories to his book.

Thy glass will show thee how thy beauties wear,
Thy dial how thy precious minutes waste,
The vacant leaves thy mind's imprint will bear,
And of this book this learning mayst thou taste:
The wrinkles which thy glass will truly show
Of mouthèd graves will give thee memory;
Thou by thy dial's shady stealth mayst know
Time's thievish progress to eternity;
Look what thy memory cannot contain
Commit to these waste blanks, and thou shalt find
Those children nursed, delivered from thy brain,
To take a new acquaintance of thy mind.
These offices so oft as thou wilt look
Shall profit thee and much enrich thy book. (1-14)

There is a comparison of three objects through whose use the young man may learn about himself physically, temporally and intellectually. These external tools,

products of the sociocultural environment within which the young man is embedded, provide various means whereby he may increase his knowledge about the world and himself; by making that which would otherwise be invisible visible: his face, time passing, and his thoughts. The opening couplet allots a line each to the glass and to the dial respectively and these are both personified and use a positive active verb, 'show', whilst the young man's 'beauty' and 'minutes' will only 'wear' and 'waste'; both negative in meaning. In contrast in the following couplet allotted to the book, in line 3 an active verb expressing a passive activity, 'will bear', is used of which the 'vacant leaves' are the subject, and then in line 4 an active verb depicts the young man as the subject who will 'taste' the objectified 'learning'. A contrast is set up between the passive position the young man occupies in relation to the revelations made known to him by the glass and dial, and the active procreative position he may occupy in relation to the revelations of the book. The initial impression then is that the glass by showing the transience of his physical form and the dial the potential squandering of time should move him to entrust himself to the more durable enactive medium of the book.

The directions in 'Sonnet 103' that the beloved young man only requires his mirror to reflect his beauty back at him initially seems entirely contrastive to 'Sonnet 77': 'Look in your glass and there appears a face/ That overgoes my blunt invention quite' (6-7). The sonnet is an actualisation of that which he advises the young man to do, but here the productive possibilities of writing are dismissed since rather than sublimating his form, the poet's words instead 'mar the subject that before was well' (10). The poet suggests that writing lacks the living vitality of the young man presented to him by the mirror: 'And more, much more, than in my verse can sit/ Your own glass shows you when you look in it' (13-14). Yet, since the poem self-evidently transcends the moment and is an immortalisation of both the young man's and the poet's existence the ultimate irony of this sonnet is that this supposed self-sufficiency of the young man and his living mirror-image is voiced to us hundreds of years later within a sonnet by the poet.

This transience of time is conveyed in Sonnet 77, through an apparently circular dynamic which moves the reader backwards and forwards both spatially over the surface of the sonnet and temporally over the vector of human life. Lines 3 and 4 set up the following eight lines, as a list of the learning, which will arise from his externalisation of himself onto the book. In this list a couplet is allotted both to the dial and the glass and then a quartet to the book itself. This reflexiveness is sent spiralling outwards by the closing couplet which cites the learning which he will take from the 'book' in line 4, as in turn enriching the 'book'. By making lines 5-12

dependent on the utilisation of the book the suggestion seems to be that this act is necessary in order for the young man to truly perceive that which his glass and dial have to teach him. The literal glass will teach him the local reality of the diminishment of his beauty and the 'mouthèd graves' of his wrinkles will prophetically remind him of his mortality. On another level, the dial will teach him the inexorable global reality of time's 'thievish progress to eternity'. Thus the young man's particular transience is set up against universal everlastingness, whilst yet being revealed as part of the same movement of time that transforms the world. The 'vacant leaves' and 'waste blanks' are set against the ominous 'mouthèd graves' and 'minutes waste' as open spaces which may be used as fertile preservers of the past and as a means of not only understanding but acting against the transience and mortality which humans are subject to, but can to an extent evade through biological and mental forms of extension.

This depiction of the book is linked to early modern 'conceptions' of the mind as impregnable like a mother's womb, as discussed in Chapter 4. In this example then the impregnated mind develops the conception into a word or action, which suggests a movement outward from the internal conception to the external. In the next stage, as evident in 'Sonnet 77', the written words' deliverance from his brain, so that he may come to know them anew, as produced by him and yet requiring reacquaintance, through their metaphorical embodiment, is an inverted mirror-image of the first process as it begins the movement inward again, from the external to the internal. It potentially begins the process full circle by ending with his new conception which when added to the book will further 'enrich' the book and 'profit' the writer (14). Writer and written reciprocally evolve through their dynamic and interactive relation to one another. In 'Memory to My Beloved' Jonson similarly describes the relationship between poet and work as a reciprocally constitutive process. When a poet strikes the muses' anvil Jonson describes it is creative of poetry and of the poet himself, the poet will 'turn the same (And himself with it) that he thinks to frame' (61-62). Writer and writing are part of an ongoing cognitive process that is mutually creative of the writing and the writer.

At issue in 'Sonnet 77' is not only the self-development offered by the book, but its durability, in contrast to the limited and leaky forgetful biological memory: 'what thy memory cannot contain' (9). This is a sentiment we find envisaged by Montaigne in reference to his own book: 'It may know a good many things that I no longer know and hold from me what I have not retained and what, just like a stranger, I should have to borrow from it if I came to need it' ('Of the Affection' 355). There is a further suggestion of an equivalency *and* a contrast being made by Montaigne

between cognitive processes stored in the biological memory or a book in his comment that: 'For lack of a natural memory I make one of paper, and as some new symptom occurs in my disease, I write it down' ('Of Experience' 1021). Awareness of the leakiness and mutability of memory, of which the early modern period was also aware, led to the perceived need of cognitive supplementation by non-biological resources, such as a book. As Clark describes: 'Ours are (by nature) unusually plastic and opportunistic brains whose biological proper functioning has always involved the recruitment and exploitation of nonbiological props and scaffolds' (*Natural-Born* 86). A contrast can also be surmised between the textual imprinting and the biological glass. Notably, in line 3 the use of 'will bear' echoes its earlier use in the sonnet sequence to refer to a biological glass; 'His tender heir might bear his memory' ('Sonnet 1' 4). Again in line 9, 'memory', appears to pick up this earlier reference, reapplied here to suggest the supplementary role in extending the subject that the book might play instead of a biological child.

The dial and the book function as metaphorical glasses, as like the literal glass they are represented as allowing the young man access to an extended reflexivity. Yet because they act as mirrors, the function of the objects as stable reflectors for which they are valued is paradoxically put into question, due to the projective subjectification by the viewer on the objects. Richard Gregory describes a similar phenomenon in terms of literal mirrors: 'these illusions of mirrors are in us rather than in the mirror' (207 *Mirrors*). And yet in fact it is the result of an interaction between our biological cognitive processes and the particular structure of mirrors (or the people, words or objects that act as mirrors) which causes the specific illusions we undergo.

However, there is a further complication here in that the whole sonnet could work as a self-address. The self-reliance and discovery through the written word that the poet is presenting to the young man, could equally be spoken to himself, who exhibits a yearning for self-understanding through the written text of the sonnets and who in 'Sonnet 66' already sees reflected in his glass the wearing of his beauty. The glass is being held up to him by the narcissistic poet whose aesthetic ideals lead him to obsess over the young man's beauty and his potential as a procreative instrument. Rae Langton in her paper on sexual solipsism discusses such a pathology of love: 'It may view the body as an object of beauty, or it may view the body as an anonymous instrument but, in either case, it ignores the person who is partly constituted by her body' (161). Although the advice to the young man in 'Sonnet 77', halfway through the 154 Sonnets, sees a movement onwards to a place where the poet sees the young man occupying the poet's own position, rather than the poet usurping the young

man's, the fact the directions could be addressed to himself, signals the poet's continuing self-referentiality and his projective objectification of the young man. So, in addition to objects being treated as extensions of people, there is repeatedly evident the reverse construction, whereby the young man is treated as an object, an instrument, or a representation of abstract values. Helpful here is Langton's description of the two phenomena of local solipsism: 'Someone may treat some things as people...Someone may treat some people as things' (150). These can be interlinking phenomena in general and here, with both the objectification of the young man and the animation of inanimate objects, they result from the projection of the poet and involve a blurring of ontological categories.

Clark and Chalmers suggest the hypothetical example of Otto and Inga who both believe they know how to get to MOMA (Metropolitan Museum of Modern Art). Yet Otto has Alzheimer's and therefore stores his knowledge in his notebook, whilst Inga uses her biological memory, with the role the retrieved information plays in guiding their behaviour having sufficient functional similarity to warrant treating both Inga's memory and Otto's notebook as contributing to their long term store of dispositional beliefs (226-30). Jack Goody earlier described literacy in terms that similarly dispute the boundaries of the mind, suggesting it as a cognitive skill that 'contests the drawing of too sharp an internal-external boundary around the psyche, separating what I can consult in my head from what I can consult in my diary' (219). In 'Sonnet 77' the words are stored in the notebook as they would otherwise be stored in the memory with a collapsing of differences between the recorded memories and the young man's own thoughts, as the textual records will also appear to mirror their growth and development. One way of interpreting this, would be that as we mature and change, so the meaning of words open to us in correspondence to our development, although in fact the same words appear on the page; in the same way my interpretation of Shakespeare's words have changed through subsequent readings, and hopefully on reading this, my perspective may add something to your own reading. As the written records will both be printed and yet not remain stable despite their fixed nature on the page, the difference between the two mediums is diminished, as the notebook, like early modern descriptions of cognitive processes, combines notions of being imprinted and as constantly changing. Yet, the mind as limited and leaky in contrast to the textual representation as a durable supplement is also foregrounded in 'Sonnet 77', evoking the two mediums' dissimilarity. Tension is raised through a recurring movement between the two interpretations, as the memory and notebook are depicted both as equivalent and as different.

This evidence both of a collapsing of differences, and the placing of emphasis on it, suggests the fluctuation between acceptance, celebration and anxiety around the issue of these boundaries in the early modern period. 'Sonnet 122' follows up themes in 'Sonnet 77', as here in response to the gift of a table (a notebook) the poet simulates offence: 'Thy gift, thy tables, are within my brain/ Full charactered with lasting memory' (1-2). Stallybrass, Chartier, Mowery, and Wolfe convincingly demonstrate that the terms table and table-book refer to an *erasable* notebook; the significance in 'Sonnet 122' is that the erasability of the table thus collapses 'the antithetical technologies of writing tables and bodily inscription into each other' since both bodily and technological resources are therefore impermanent (417). Yet, the rest of the sonnet then reconstructs their differences more modestly. Writing tables as a technology of both memory and erasure, as 'a materialisation of forgetfulness', the authors suggest, illustrate a facet of early modern subjects' shaping and being shaped by a structure of memory different from our own (410, 417-18).

Although in 'Sonnet 77' it is not clear whether the book referred to is erasable or not, nor whether it is the same as referred to in 'Sonnet 122', apparent in it are an initial constructing and collapsing of differences between external and internal cognitive resources, which are again constructed, collapsed and tentatively reconstructed in the later sonnet. Firstly, differences are constructed through the contrast between the memory as a leaky and limited container, whilst the book is represented as supplementing its deficiency (although that some books were erasable, would affect interpretation of the book as a durable supplement). Secondly, differences are collapsed, as the metaphors which describe the imprinting and changing of the records stored correspond to conventional metaphors used for mental processes, thus making the book appear analogous to the mind. The closing couplet of 'Sonnet 122', 'To keep an adjunct to remember thee/ Were to import forgetfulness in me', laments this too human quality of forgetting, which it seems also extends to our external resources in their potential mutability. Mary Carruthers' depiction of mnemotechnics as understood to be necessary for thought, also reveals that memory training was viewed as an ethical necessity formative of an individual's humanity: 'A person without a memory, if such a thing could be, would be a person without moral character and, in a basic sense, without humanity' (*Book 14*).

Our recognition of this anxiety about the reliability of memory and memory tools suggests, that in respect of our subjectivity, memory continues to be viewed as a vital component. The reassurance offered by 'Sonnet 77' in the form of the book as a supplement of the young man's mind, has underlying it an anxiety about the

stability of our memory and hence also our subjectivity; a forgetting, that like mortality ends only in silent 'mouthèd graves', haunts the sonnet. Yet, this is vitally juxtaposed with a celebration of the book as a living image, with corporeal processes used to understand cognitive and technological processes of reproduction. Thus, the mutability of the textual and the biological forms, also represent the potential for creative reproduction and through the distance of time 'a new acquaintance' with that which was forgotten. Whilst technological resources and biological memory are subject to change over time they continue to play dynamic roles in constructing our subjectivity and contributing to our creative productivity.

Conclusions

The use of the mirror in Shakespeare's works, both as a stage prop and as a literary motif, opens a view for us into early modern concepts about cognition and subjectivity and enables the examination of their relation to current embodied, embedded and extended mind ideas. This closing chapter again shows Shakespeare adopting and transforming conventional mirror-motifs. The mirror-motifs provide evidence that characters who attempt to situate their subjectivity entirely within, as a transcendent, autonomous and centralised inwardness, are portrayed as failing to take into account the fundamental role of forms of extendedness and the intersubjective make up of their intrasubjectivity. Third-person perspectives, visual perception and introspection are compared in terms of performing similar functions and the body and passions are shown to be part of the loop of reason. Characters are depicted as both intentionally and unintentionally acting as a subjective prop for another character; either as a model for imitation or through providing a supplementary perspective. The intentions of the subject holding up the mirror do not necessarily affect the accuracy of the image they reflect, although like a character's introspective reflections they are not certainly reliable either. Since both third-person and first-person perspectives vary in reliability a combination of outward and inward mirrors appears the only way forward for a human subject. The Shakespearean character, like the early modern subject, is depicted as existing in a biological, sociocultural, technological and spiritual universe, in which all factors are at once variably divisible and dynamically in play.

Epilogue

Thus, as a ponderous thing in water cast
Extendeth circles into infinites,
Still making that the greatest that is last,
Till the one hath drowned the other in our sights,
So in my brain; the strong impression
Of thy rich labours worlds of thoughts created,
Which thoughts being circumvolved in gyre-like motion
Were spent with wonder as they were dilated,
Till giddy with amazement I fell down
In a deep trance;...
...When, lo, to crown thy worth
I struggled with this passion that did drown
My abler faculties; and thus brake forth:
Palmer, thy Travails well become thy name,
And thou in them shalt live as long as fame. (Ben Jonson, 'To Thomas Palmer' 17-31)

Ben Jonson poetically evokes the extended mind in motion, propelled by the creative labours of another, namely Thomas Palmer's emblem book. In Jonson's mind the impact of Palmer's 'labours' (a word recalling childbirth) creates worlds, his mind extending under their impetus until they escape his grasp; the myriad thoughts set whirling, wave succeeds wave in succession, gaining force one over the other as his amazement increases till entirely overwhelming him. Out of the depths, as Jonson struggles to contain and so convey his passion, there wondrously emerges forth this poem itself. The closing couplet reiterates another implicit meaning: the extended subjectivity offered by the vital persistence of the written word. Thus, more prosaically through the processes of reading, notetaking, rereading, organizing, reorganizing, writing, drafting, and redrafting my thoughts flowing outwards from the ponderous worlds of extended mind, critical, early modern and Shakespearean texts, this thesis has emerged.

This thesis suggests rich possibilities for further literary studies utilising the extended mind theory. It has explored the relation of a literary scholar's usual tools (literary, psychoanalytical and cultural theories) to extended mind ideas. Extended mind theory is interrogative of two key assumptions frequently made by these theories: the significant extent of the role that sociocultural constructivism plays in making up a human subject and the absolute contingency and relativism of human subjects in different periods. EM suggests that power relations, social context and relativism have vital contributions to make but are not the whole picture. The extended mind hypothesis lends itself to a view of human subjects and worlds as involving both changes and continuities. It is applicable to other times and places, because of the continuing nature of human hybridity, at the same time as that

hybridity intimately involves humans in dynamic and transformative relations with their environmental, sociocultural and technological contexts.

Through the examination of literary and other cultural texts, this thesis has explored the myriad ways in which concepts comparable with and contrastive to current extended mind theories were evident in the early modern period and in Shakespeare's use of the mirror as a visual and figurative resource. Both modern and early modern forms of the paradigm share an understanding that humans' neurological plasticity and permeable embodiment enable the co-opting of external sociocultural, environmental and technological tools. The body, objects, language, other people, and the context are described as extensions of the subject and its cognitive processes. In the early modern period types of cognition relating to internal reflection, and mental time and spatial travel are also thought of in terms of extension, imagined as the human mind intellectually aspiring to God-like understanding. These types of cognitive extensions are variously figured as complementary to, or as in opposition to, extension through the body and world. The intricate relations between modern and early modern theories play out through the use of the mirror-motif in Shakespeare's works, which also reveals related concerns about the (un)reliability of first-person and third-person perspectives, and the complex relationships between the technological, biological and sociological forms of mirroring. Since such 'cognitive hybridization' has arguably here been established as a historical and natural aspect of the human subject, other possible future projects might consider how extended mind ideas are evident in literature of other periods (*Natural-Born* 4).

Opening out our view for a closing wide angle shot, the background panorama against which Clark's claim that humans are natural-born cyborgs is set is that we are of the world; the world in which humans, as the most evolved creatures, are therefore the most fundamentally entwined with our external technologies and surroundings. This is the constant that underlies our adaptability to changing sociocultural constructions, whilst at the same time this increasing plasticity is also part of a much more slowly evolving movement within nature. Our psychophysiology also acts as a constraint that confines as well as allows our perceptions and interpretations, both as a species and on a more individual level. Meanwhile, the technologies and cultural constructs to which we adapt, we also develop into more sophisticated forms, as they interact with us in increasingly diverse hybridisations and as catalytic players in our developmental and evolutionary drama. Ever evolving cultural constructs are dynamically enmeshed with the ever evolving physical universe around us; both mechanisms operate at diverse tempos, running over vast panoramas of time or changing within the instant as they interactively coevolve. This has implications too

for the literary world. In the vital persistence of texts despite the fleeting ever-evolving meanings of words, early modern thinkers present their minds extended out to us. In turn, I offer this to you.

This thesis has drawn to a close: 'Finally, there is a product.' (Clark, *Mindware* 142).

Bibliography

Primary Works

- Anon. 'A Letter sent by the Maydens of London.' London: Henry Binneman, 1567.
- Aristotle. *The Nicomachean Ethics*. 1925. Trans. David Ross. Rev. trans. J.L. Ackrill and J.O. Urmson. Oxford: Oxford University Press, 1980.
- Ascham, Roger. *The Scholemaster*. London: John Daye, 1570.
- Aquinas, Thomas. *An Aquinas Reader*. Ed. Mary T. Clark. London: Hodder and Stoughton, 1974.
- . *Summa Theologiae: A Concise Translation*. 1989. Ed. Timothy Mc Dermott. Texas: Christian Classics, 1991.
- Awdelay, John. *The Fraternite of Vacabondes*. London: John Awdelay, 1575.
- Bacon, Francis. *Essays*. 1937. Oxford: Oxford University Press, 1962.
- . *The New Organon*. Ed. Lisa Jardine and Michael Silverthorne. Cambridge: Cambridge University Press, 2000.
- . *The Oxford Francis Bacon IV: The Advancement of Learning*. Ed. Michael Kiernan. Oxford: Clarendon Press, 2000.
- Baldwin, William. *The Last Part of the Mirour for Magistrates*. London: Thomas Marsh, 1578.
- Barnes, Barnabe. *The Divils Charter*. London: George Eld, 1607.
- Bartholomaeus, Anglicus. *Batman vppon Bartholome his Booke De Proprietatibus Rerum*. London: Thomas East, 1582.
- Beard, Thomas. *The Theatre of Gods Judgements*. London, S. I and M. Hand, 1642.
- Beaumont, Francis. *The Knight of the Burning Pestle*. Ed. Sheldon P. Zitner. Manchester: Manchester University Press, 2004.
- Beaumont, Francis and John Fletcher. *Philaster or Love Lies a-Bleeding*. Ed. Andrew Gurr. London: Methuen, 1969.
- The Bible, that is, the Holy Scriptures conteyned in the Olde and Newe Testament*. London: Deputies of Christopher Barker, 1590.
- Breton, Nicholas. *Characters upon Essays, Moral and Divine. Character Writings of the Seventeenth Century*. 1891. Ed. Henry Morley. Charleston: Bibliobazaar, 2006. 207-222.
- . *The Good and the Bad. Character Writings of the Seventeenth Century*. 1891. Ed. Henry Morley. Charleston: Bibliobazaar, 2006. 222-245.
- Bright, Timothy. *A Treatise of Melancholy*. London: Thomas Vautrolier, 1586.
- Bullokar, John. *An English Expositor*. London: John Legatt, 1616.
- Bulwer, John. *Chirologia*. London: Thomas Harper, 1644.
- Burton, Robert. *The Anatomy of Melancholy*. Ed. Holbrook Jackson. New York: New York Review Books, 2001.
- Castiglioni, Baldesar. *The Book of the Courtier*. Trans. George Bull. London: Penguin's Classics, 2003.
- Chapman, George and Christopher Marlowe. *Hero and Leander. The Complete Works of Christopher Marlowe*. 1973. Vol. 2. Ed. Fredson Bowers. Cambridge: Cambridge University Press, 1981. 423-516.
- Charron, Pierre. *Of Wisdome*. Trans. Samson Lennard. London: Eliot's Court Press, 1608.
- Chaucer. 'The Knight's Tale.' *The Riverside Chaucer*. 3rd ed. Oxford: Oxford University Press, 2008. 37-66.

- Coeffeteau, F. N. *A Table of Humane Passions*. Trans. Edward Grimeston. London: Nicholas Okes, 1621.
- Coote, Edmund. *The English Schoole-master*. London: Ralph Jackson and Robert Dexter, 1596.
- Crooke, Helkiah. *Mikrokosmographia: A Description of the Body of Man*. London: William Jaggard, 1615.
- Dante, Alighieri. *The Divine Comedy 3: Paradiso*. Trans. John D. Sinclair. Oxford: Oxford University Press, 1961.
- Davies, John. *Nosce Teipsum*. London: Richard Field, 1599.
- Davies of Hereford, John. 'The Ciuile Warres of Death and Fortune.' *Humours Heauen on Earth*. London: A.I., 1605. 183-219.
- . 'Humours Heauen on Earth.' *Humours Heauen on Earth*. London: A.I., 1605. 1-183.
- . 'The Triumph of Death.' *Humours Heauen on Earth*. London: A.I., 1605. 220-248.
- Dee, John. *A True and Faithful Relation*. London: D. Maxwell, 1659.
- Dekker, Thomas. *The Guls Horne-Booke*. London: [Nicholas Oakes], 1609.
- Descartes, René. *The Philosophical Writings of Descartes*. Trans. John Cottingham, Robert Stoothoff and Dugald Murdoch. 2 vols. Cambridge: Cambridge University Press, 1985.
- Donne, John. *Devotions upon Emergent Occassions*. Ed. Anthony Raspa. Oxford: Oxford University Press, 1987.
- . *Letters to Certain Persons of Honour*. London: J. Flesher, 1651.
- . *The Major Works*. Ed. John Carey. Oxford: Oxford University Press, 1990.
- . *The Sermons of John Donne*. Ed. Evelyn M. Simpson and George Potter. 10 vols. Berkeley: University of California Press, 1962.
- Earle, John. *Microcosmography. Character Writings of the Seventeenth Century*. 1891. Ed. Henry Morley. Charleston: Bibliobazaar, 2006. 143-206.
- Elizabeth I. 'Queen Elizabeth's speech to the troops at Tilbury'. *Women's Writing of the Early Modern Period, 1588-1688: An Anthology*. Ed. Stephanie Hodgson-Wright. Edinburgh: Edinburgh University Press, 2002. 1.
- Erasmus, Desiderius. *De Ciuilitate Morum Puerilium. A Lytle Booke of Good Maners for Chyl dren*. Trans. Robert Whittington. London: John Wallye, 1554.
- . *The Education of a Christian Prince*. Ed. Lisa Jardine. Cambridge: Cambridge University Press, 1997.
- Ficino, Marsilio. *Five Questions Concerning the Mind*. Trans. Josephine L. Burroughs. *The Renaissance Philosophy of Man*. Ed. Ernest Cassirer and Paul Oskar Kristeller. Chicago: University of Chicago Press, 1948. 193-212.
- Florio, John. *A World of Words*. London: Edward Blount, 1598.
- Greene, Robert. *Greenes, Groats-vvorth of Witte, bought with a million of Repentance*. London: J. Wolfe and J. Danter, 1592.
- G., T. *The Rich Cabinet*. London: J[ohn] B[eale], 1616.
- Hall, Joseph. *Characters of Virtues and Vices. Character Writings of the Seventeenth Century*. 1891. Ed. Henry Morley. Charleston: Bibliobazaar, 2006. 99-141.
- Harman, Thomas. *Caveat for Commen Cursetors*. London: Henry Middleton, 1573.
- Herbert, George. *Outlandish Proverbs, Selected by Mr. G.H.* London: T. P[aine], 1640.
- Heywood, Thomas. *An Apology for Actors*. London: Nicholas Okes, 1612.
- Holinshed, Raphael. *The First and Second Volumes of Chronicles*. London: John Hooker, 1587.
- Howell, James. *Epistolæ Ho-Eliaæ: Familiar Letters*. London: W.H., 1560

- Gosson, Stephen. *The Schoole of Abuse*. London: T. Dawson, 1579.
- Jonson, Ben. *The Complete Poems*. 1975. Ed. George Parfitt. Rev. ed. London: Penguin, 1996.
- . *Cynthia's Revels. Works: Complete Critical Edition*. 1932. Vol. 4. Ed. C.H. Herford and P. Simpson. Rev. ed. Oxford: Oxford University Press, 1986. 1-184.
- . *Every Man out of his Humour. Works: Complete Critical Edition*. 1927. Vol. 3. Ed. C.H. Herford and P. Simpson. Rev. ed. Oxford: Oxford University Press, 1986. 405-601.
- . *Sejanus His Fall. Works: Complete Critical Edition*. 1932. Vol. 4. Ed. C.H. Herford and P. Simpson. Rev. ed. Oxford: Oxford University Press, 1986. 327-471.
- . *Timber; Or Discoveries. The Complete Poems*. 1975. Ed. George Parfitt. Rev. ed. London: Penguin, 1996. 373-458.
- La Primaudaye, Pierre de. *The French Academie*. Trans. Thomas Bowes. London: John Legat, 1618.
- Lemnius, Levinus. *The Touchstone of Complexions*. Trans. Thomas Newton. London: Thomas Marsh, 1576.
- Lipsius, Justus. *Sixe bookes of politickes or ciuil doctrine*. Trans. William Jones. London: Richard Field, 1594.
- Lupton, Donald. *London and the Countrey Carbonadoed*. London: Nicholas Okes, 1632.
- Machiavelli, Niccolo. *The Prince*. Ed. Quentin Skinner and Russell Price. Trans. Russell Price. Cambridge: Cambridge University Press, 1988.
- Marlowe, Christopher. *Edward II. The Complete Works of Christopher Marlowe*. 1973. Vol. 2. Ed. Fredson Bowers. Cambridge: Cambridge University Press, 1981. 1-120.
- . 'Liber Secundus: Elegia 17.' *Ovid's Elegies. The Complete Works of Christopher Marlowe*. 1973. Vol. 2. Ed. Fredson Bowers. Cambridge: Cambridge University Press, 1981. 363.
- . *Tamburlaine: Part I. The Complete Works of Christopher Marlowe*. 1973. Vol. 1. Ed. Fredson Bowers. Cambridge: Cambridge University Press, 1981. 71-148.
- Marston, John. *The Scovrge of Villanie*. London: J[ames] R[oberts], 1598.
- Massinger, Philip. *A New Way to Pay Old Debts*. Ed T.W. Craik. London: A. & C. Black, 1993.
- Meres, Francis. *Palladis Tamia. Wits Common Wealth: The Second Part*. London: William Stansby, 1634.
- Montaigne, Michel de. *The Complete Works*. Trans. Donald M. Frame. London: Everyman's Library, 2003.
- Nixon, Anthony. *The Dignitie of Man*. London: Edward Allde, 1612.
- Overbury, Thomas. *Characters. Character Writings of the Seventeenth Century*. 1891. Ed. Henry Morley. Charleston: Bibliobazaar, 2006. 32-98.
- Petrarca, Francesco. 'Sonnet 45.' *The Canzoniere*. Vol. 1. Trans. Frederic J. Jones. Leicester: Troubador Publishing, 2000. 55-57.
- . 'Sonnet 46.' *The Canzoniere*. Vol. 1. Trans. Frederic J. Jones. Leicester: Troubador Publishing, 2000. 56-57.
- Phillips, Edward. *The New World of English Words*. London: E. Tyler, 1658.
- Pico della Mirandola, Giovanni. *Oration on the Dignity of Man*. Trans. Elizabeth Livermoore Forbes. *The Renaissance Philosophy of Man*. Ed. Ernest Cassirer and Paul Oskar Kristeller. Chicago: University of Chicago Press, 1948. 223-54.

- Plato. *Alcibiades. Plato on Love: Lysis, Symposium, Phaedrus, Alcibiades, with Selection from Republic and Laws*. Ed. C.D.C. Reeve. Indianapolis: Hackett Publishing, 2006. 154-207.
- . *Phaedrus*. Trans. Robin Waterfield. Oxford: Oxford University Press, 2002.
- . *Plato's Theatetus*. Trans. Seth Bernadette. Chicago: Chicago University Press, 1986.
- Plutarch. *Sir Thomas North's Translation of Plutarch's 'Lives': Selected Lives from the Lives of the Noble Grecians and Romans*. Ed. Paul Turner. 2 vols. Liverpool: Centaur Press, 1963.
- Pomponazzi, Pietro. *On the Immortality of the Soul*. Trans. William Henry Hay II. Rev. John Herman Randall. *The Renaissance Philosophy of Man*. Ed. Ernest Cassirer and Paul Oskar Kristeller. Chicago: University of Chicago Press, 1948. 280-381.
- Puttenham, George. *The Arte of English Poesie*. London: Richard Field, 1589.
- Raynalde, Thomas. *The Byrth of Mankynde*. London: Richard Jugge, 1560.
- Rogers, Thomas. *A Paterne of a Passionate Minde*. London: Thomas East, 1580.
- S., J. *England's Merry Jester*. London: J. Wilde, 1693.
- Scot, Reginald. *Scot's Discovery of Witchcraft*. London: R.C., 1651.
- Shakespeare, William. *The Collected Works of Shakespeare*. London: Norton, 1997.
- Sidney, Philip. *A Defense of Poesy. The Major Works*. Oxford: Oxford University Press, 2002. 212-250.
- Spenser, Edmund. *The Faerie Queene*. Ed. Thomas P. Roche and C. Patrick O'Donnell. London: Penguin, 1987.
- Stubbes, Phillip. *The Anatomie of Abuses*. London: Richard Jones, 1583.
- Theophrastus. *Characters of Theophrastus*. Ed and trans. James Diggle. Cambridge: Cambridge University Press, 2004.
- Tomkis, Thomas. *Lingua: or The Combat of The Tongue, and The Fiue Senses for Superiority*. London: G. Eld., 1607.
- Vigo, Joannes de. *The Most Excellent Workes of Chirurgerye*. Trans. Bartholomew Traheron. London: Edward Whitechurch, 1543.
- Walkington, Thomas. *The Optick Glasse of Humors*. London: John Windet, 1607.
- Walton, Izaak. *The Lives of Dr. John Donne, Sir Henry Wotton, Mr. Richard Hooker, Mr. George Herbert*. London: Thomas Newcomb, 1670.
- Webster, John. *The Duchess of Malfi. John Webster: Three Plays*. Ed. D.C. Gunby. 1972. Rpt. with minor revisions. London: Penguin Books, 1995. 167-292.
- . *The White Devil or Vittoria Corombona. John Webster: Three Plays*. Ed. D.C. Gunby. 1972. Rpt. with minor revisions. London: Penguin Books, 1995. 33-166.
- White, Thomas. *A Sermon Preached at Pawles Crosse on Sunday the thirde of Nouember 1577 in the Time of the Plague*. London: Francis Coldock, 1578.
- Wilson, Thomas. *A Christian Dictionary*. London: William Jaggard, 1612.
- Wilson, Thomas. *The Arte of Rhetorique*. London: Richardus Graftonus, 1553.
- Wither, George. *A Collection of Emblems*. London: A[ugustine] M[athewes], 1635.
- . *The Schollers Purgatory*. London: G. Wood, 1624.
- Wright, Thomas. *The Passions of the Mind in General*. Ed. William Webster Newbold. New York: Garland Publishing, 1986.
- Wroth, Mary. 'Pamphilia to Amphilanthus.' *Women's Writing of the Early Modern Period, 1588-1688: An Anthology*. Ed. Stephanie Hodgson-Wright. Edinburgh: Edinburgh University Press, 2002. 143-199.

Secondary Works

- Adler, Hans and Sabine Gross. 'Adjusting the Frame: Comments on Cognitivism and Literature.' *Poetics Today* 232 (Summer 2002): 195-220.
- Agloti, Salvatore M., Paolo Cesari, Michela Romani and Cosimo Urgesi. 'Action Anticipation and Motor Resonance in Elite Basketball Players.' *Nature Neuroscience* 11.9 (2008): 1109-16.
- Anderson, Michael. 'The Massive Redeployment Hypothesis and the Functional Topography of the Brain.' *Philosophical Psychology* 20.2 (2007): 143-74.
- Arikha, Noga. *Passions and Tempers: A History of the Humours*. New York: HarperCollins, 2007.
- Arnold, Matthew. 'Literature and Science.' *The Complete Prose Works of Matthew Arnold*. Vol 10. Ed. R.H. Super. Ann Arbor: University of Michigan Press, 1974. 53-73.
- Baars, J. 'In the Theatre of Consciousness: Global Workspace Theory, a Rigorous Scientific Theory of Consciousness.' *Journal of Consciousness Studies* 4.4 (1997): 292-309.
- Baldwin, Robert. 'Gates Pure and Shining and Serene: Mutual gazing as an Amatory Motif in Western Literature.' *Renaissance and Reformation* 22 (1986): 22-48.
- Barbieri, Richard E. 'John Donne and Richard II: An Influence?' *Shakespeare Quarterly* 26.1 (Winter 1975): 57-62.
- Bate, Jonathan. *Shakespeare and Ovid*. Oxford: Clarendon Press, 1993.
- Bechara, Antoine, Hanna Damasio, Daniel Tranel and Antonio Damasio. 'Deciding Advantageously Before Knowing the Advantageous Strategy.' *Science* 275 (1997): 1293-95.
- Beecher, Donald. Rev. of *Word vs. Image: Cognitive Hunger in Shakespeare's England*, by Ellen Spolsky. *Renaissance Quarterly* 60.4 (2007): 1477-79.
- Berg, J.M. 'Shakespeare as a geneticist.' *Clinical Genetics* 59 (2001): 165-70.
- Berti, A. and F. Frassinetti. 'When far becomes near: re-mapping of space by tool use'. *Journal of Cognitive Neuroscience* 12 (2000): 415-20.
- Bicks, Caroline. 'Stones like Women's Paps: Revising Gender in Jane Sharp's *Midwives Book*.' *The Journal for Early Modern Cultural Studies* 7.2 (2007): 1-27.
- Blair, Ann. 'Reading Strategies for Coping with Information Overload.' *Journal of the History of Ideas* 64.1 (January 2003): 11-28.
- Breitenberg, Mark. *Anxious Masculinity in Early Modern England*. Cambridge: Cambridge University Press, 1996.
- Brown, Pamela Allen. *Better a Shrew than a Sheep: Women, Drama and the Culture of Jest in Early Modern England*. New York: Cornell University, 2003.
- Brown, Theodore M. 'Descartes, Dualism, and Psychosomatic Medicine.' *The Anatomy of Madness: Essays in the History of Psychiatry*. Vol. 1. Ed. W.F. Bynum, Roy Porter, and Michael Shepherd. London: Tavistock Publications, 1985. 40-62.
- Broks, Paul. 'The Ego Trip.' *Guardian* 6 May 2006: 27-28.
- Bullough, Geoffrey, ed. *Narrative and Dramatic Sources of Shakespeare*. 3 vols. London: Routledge, 1957.
- Burckhardt, Jacob. *The Civilization of the Renaissance in Italy*. Trans. S.G.C. Middelmore. New York: Mentor, 1960.
- Burrow, Colin. 'Recitations.' *London Review of Books* 5 Oct. 2006: 3-6.

- Butler, C. Rev. of *The Bard on the Brain: Understanding the Mind through the Art of Shakespeare and the Science of Brain Imaging*, by Paul M. Matthews and Jeffrey McQuain. *Journal of Neurology, Neurosurgery, and Psychiatry* 75 (2004): 1085.
- Butler, Judith. *Bodies That Matter*. New York: Routledge, 1993.
- . *Gender Trouble*. 1990. New York: Routledge, 1999.
- . *Giving an Account of Oneself*. New York: Fordham University Press, 2005.
- . 'Giving an Account of Oneself.' *Diacritics* 31 (Winter 2001): 22-40.
- . 'Imitation and Gender Insubordination.' *Literary Theory: An Anthology*. 1998. Ed. Julie Rivkin and Michael Ryan. Oxford: Blackwell Publishers, 2000. 722-30.
- Bynum, Caroline Walker. 'Why All the Fuss about the Body? A Medievalist's Perspective.' *Critical Enquiry* 22.1 (Autumn 1995): 1-34.
- Bynum, W.F. and Michael Neve. 'Hamlet on the Couch.' *The Anatomy of Madness: Essays in the History of Psychiatry*. Vol.1. Ed. W.F. Bynum, Roy Porter, and Michael Shepherd. London: Tavistock Publications, 1985. 289-304.
- Callaghan, Dymna. 'Body problems.' *Shakespeare Studies* 29 (2001): 68-71.
- Calvo-Merino, B., D.E. Glaser, J. Grèzes, R.E. Passingham and P. Haggard. 'Action Observation and Acquired Motor Skills: An fMRI Study with Expert Dancers.' *Cerebral Cortex* 15.8 (2005): 1243-49.
- Carpenter, Sarah. "'My Lady Tongue": Thomas Tomkis's *Lingua*.' *Medieval English Theatre* 24 (2002): 3-14.
- . *Masks and Masking in Medieval and Early Tudor England*. Aldershot: Ashgate, 2002.
- . 'Masks and Mirrors: Questions of Identity in Medieval Morality Drama.' *Medieval English Theatre* 13 (1991): 7-17.
- Carroll, Joseph. *Evolution and Literary Theory*. Columbia: University of Missouri, 1994.
- Carroll, William C. 'Goodly Frame, Spotty Globe: Earth and Moon in Renaissance Literature.' *Earth, Moon and Planets* 85-86 (2001): 5-23.
- Carruthers, Mary. *The Book of Memory: A Study of Memory in Medieval Culture*. 1990. Cambridge: Cambridge University Press, 2008.
- Carruthers, Mary and Yadin Dudai. 'The Janus Face of Mnemosyne.' *Nature* 31st March 2005: 567.
- Cassirer E., P.O. Kristeller & J.H. Randall, Jr., eds. *The Renaissance Philosophy of Man*. Chicago: University of Chicago Press, 1948.
- Chalmers, David. 'Facing up to the Problem of Consciousness.' *Journal of Consciousness Studies* 2.3 (1995): 200-19.
- Chaytor, H.J. *From Script to Print: An Introduction to Medieval Literature*. Cambridge: Cambridge University Press, 1945.
- Citri, Ami and Robert C. Malenka. 'Synaptic Plasticity: Multiple Forms, Functions, and Mechanisms.' *Neuropsychopharmacology* 33 (2008): 18-41.
- Clanchy, M.T. *From Memory to Written Record: England, 1066-1307*. 1979. 2nd ed. Oxford: Blackwell, 1993.
- Clark, Andy. 'Artificial Intelligence and the Many Faces of Reason.' *The Blackwell Guide to Philosophy Of Mind*. Ed. Stephen P. Stich and Ted A. Warfield. Malden: Blackwell: 2003.
- . 'Author's Response.' *Metascience* 7 (1998): 95-103.
- . *Being There: Putting Brain, Body and World Together Again*. Cambridge, MA: MIT Press, 1997.

- . 'Cognitive Complexity and the Sensorimotor Frontier.' *Proceedings of the Aristotelian Society, Supplementary Volumes* 80 (2006): 43-65.
- . 'I am John's Brain.' *Journal of Consciousness Studies* 2.2 (1995): 144-8.
- . 'Magic Words: How Language augments Human Computation.' *Language and Thought: Interdisciplinary Themes*. Ed. Peter Carruthers and Jill Boucher. Cambridge: Cambridge University Press, 1998. 162-83.
- . 'Memento's Revenge: The Extended Mind, Extended.' Available at *Andy Clark Papers Available Online*: 1-43. 20 July 2008.
<<http://www.philosophy.ed.ac.uk/staff/clark/publications.html>>
- . *Mindware*. Oxford: Oxford University Press, 2001.
- . *Natural-Born Cyborgs*. Oxford: Oxford University Press, 2003.
- . 'Pressing the Flesh: A Tension in the Study of the Embodied Mind?' *Philosophy and Phenomenological Research* 76.1 (2008): 37-59.
- . 'Soft Selves and Ecological Control.' *Distributed Cognition and the Will: Individual Volition and Social Context*. Ed. Don Ross, David Spurrett, Harold Kincaid and G. Lynn Stephens. Cambridge, MA: MIT Press, 2007. 101-22.
- . *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*. Oxford: Oxford University Press, 2008.
- . 'That Special Something: Dennett on the Making of Minds and Selves.' *Daniel Dennett*. Ed. Andrew Brook and Don Ross. Cambridge: Cambridge University Press, 2002. 187-205.
- . 'We Have Always Been...Cyborgs: Author's Response' *Metascience* 13 (2004): 169-81.
- Clark, Andy and David Chalmers. 'The Extended Mind.' 1998. Reprinted in *Supersizing the Mind: Embodiment, Action and Cognitive Extension*. By Andy Clark. Oxford: Oxford University Press, 2008. 220-32.
- Clark, Andy and Jesse Prinz. 'Putting Concepts to Work: Some Thoughts for the Twentyfirst Century.' *Mind and Language* 19.1 (February 2004): 57-69.
- Clanchy, M.T. *From Memory to Written Record: England, 1066-1307*. Cambridge, MA: Harvard University Press, 1979.
- Coleman, Patrick. 'Life-writing and the Legitimation of the Modern Self.' Introduction. *Representations of the Self from the Renaissance to Romanticism*. Ed. Patrick Coleman, Jayne Lewis and Jill Kowalk. Cambridge: Cambridge University Press, 2000. 1-15.
- Collini, Stefan. Introduction. *The Two Cultures*. Ed. Stefan Collini. Cambridge: Cambridge University Press, 1993. vii-lxxi.
- Copenhaver, Brian P. and Charles B. Schmitt. *Renaissance Philosophy*. Oxford: Oxford University Press, 1992.
- Cowley, Stephen. 'Distributed Cognition: Biomechanics, Functions, and the Origins of Talk.' *Emergence of Communication and Language*. Ed. Caroline Lyon, Christopher L. Nehaniv, Angelo Cangelosi. London: Springer, 2007. 105-127.
- Crane, Mary Thomas. *Shakespeare's Brain: Reading with Cognitive Theory*. Princeton: Princeton University Press, 2001.
- Crane, Mary Thomas and Alan Richardson. 'Literary Studies and Cognitive Science: Toward a New Interdisciplinarity.' *Mosaic* 32.2 (1999): 123-40.
- Curtius, Ernst Robert. *European Literature and the Latin Middle Ages*. Trans. W. Trask. New York: Bollingen Foundation, 1953.

- Damasio, Antonio. 'Commentary on Emotions: Neuro-Psychoanalytic Views.' *Neuro-Psychoanalysis: An Interdisciplinary Journal for Psychoanalysis and the Neurosciences* 1.1 (1999): 38-9.
- . *Descartes' Error: Emotion, Reason and the Human Brain*. 1994. Rev. ed. and new preface. London: Vintage Books, 2006.
- . *The Feeling of What Happens: Body, Emotion and the Making of Consciousness*. London: Vintage, 2000.
- Damasio, Antonio, B.J. Everitt., and D. Bishop. 'The Somatic Marker Hypothesis and the Possible Functions of the Prefrontal Cortex [and Discussion].' *Philosophical Transactions: Biological Sciences* 351 (1996): 1413-20.
- Damasio, Hanna, Thomas Grabowski, Randall Frank, Albert Gabadura, and Antonio Damasio. 'The Return of Phineas Gage: Clues about the Brain from the Skull of a Famous Patient.' *Science* 264 (1994): 1102-1105.
- Davis, Philip. *Shakespeare Thinking*. London: Continuum, 2007.
- Dawkins, Richard. *The Selfish Gene*. 1976. 30th anniversary ed. Oxford: Oxford University Press, 2006.
- de Grazia, Margreta. 'Hamlet's Thoughts and Antics.' *Early Modern Culture* 2 (2001): Sections 1-22. 1 May 2005. <<http://eserver.org/emc/>>.
- de Grazia, Margreta and Peter Stallybrass. 'The Materiality of the Shakespearean Text.' *Shakespeare Quarterly* 44.3 (1993): 255-83.
- Dennett, Daniel C. *Brainchildren: Essays on Designing Minds*. Cambridge, MA: MIT Press, 1998.
- . *Consciousness Explained*. London: Penguin, 1991.
- . *Kinds of Minds: The Origins of Consciousness*. London: Phoenix, 1997.
- Derrida, Jacques. *Dissemination*. 1972. Trans. Barbara Johnson. London: Athlone Press, 2004.
- . *Of Grammatology*. 1967. Trans. Gayatri Chakravorty Spivak. Baltimore: John Hopkins University Press, 1997.
- . *The Post Card: From Socrates to Freud and Beyond*. Trans. Alan Bass. Chicago: Chicago University Press: 1987.
- de Sousa, Ronald. 'Twelve Varieties of Subjectivity: Dividing in Hopes of Conquest.' *Ronald de Sousa's Homepage*. 2002. 19 April 2006. <<http://www.chass.utoronto.ca/~sousa/subjectivity.html>>.
- Doerner, Klaus. *Madmen and the Bourgeoise: A Social History of Insanity and Psychiatry*.
- Dollimore, Jonathan. 'Death and the Self.' *Representing the Self: Histories from the Renaissance to the Present*. Ed. Roy Porter. London: Routledge, 1997. 249-61.
- . *Death, Desire and Loss in Western Culture*. 1998. New York: Routledge, 2001.
- Eagleton, Terry. *Literary Theory: An Introduction*. 1983. London: Blackwell Publishers, 1996.
- Eisenstein, Elizabeth L. *The Printing Revolution in Early Modern Europe*. Cambridge: Cambridge University Press, 1983.
- Ekman, Paul. *Emotions Revealed: Understanding Faces and Feelings*. London: Phoenix, 2004.
- Elam, Keir. "'In What Chapter of His Bosom?'" Reading Shakespeare's Bodies.' *Alternative Shakespeares*. Vol. 2. London: Routledge, 1996. 141-163.
- Elias, Cynthia L. and Laura Berk. 'Self-regulation in young children: is there a role for Sociodramatic Play?' *Early Childhood Research Quarterly* 17 (2002): 216-38

- Ehrsson, H. Henrik. 'The Experimental Induction of Out-of-Body Experiences.' *Science* 317: 1048.
- Evans, Dylan. *An Introductory Dictionary of Lacanian Psychoanalysis*. London: Routledge, 1997.
- . 'From Lacan to Darwin.' *The Literary Animal: Evolution and the Nature of Narrative*. Ed. Jonathan Gottschall and David Sloan Wilson. Evanston: Northwestern University Press, 2005. 38-55.
- Fausto-Sterling, Anne. *Sexing the Body: Gender Politics and the Construction of Sexuality*. New York: Basic Books, 2000.
- Felman, Shoshana. 'Woman and Madness: The Critical Phallacy.' *Feminisms*. Ed. Robyn R. Warhol and Diane Price Herndl. New Jersey: Rutgers University Press, 1997. 7-20.
- Fineman, Joel. *Shakespeare's Perjured Eye: The Invention of Poetic Subjectivity in the Sonnets*. Berkeley: University of California Press, 1986.
- Fissell, Mary. 'Gender and Generation: Representing Reproduction in Early Modern England.' *Gender & History* 7.3 (November 1995): 433-56.
- Fleming, Juliet. 'Response to Margreta de Grazia's "Hamlet's Thoughts and Antics".' *Early Modern Culture* 2 (2001): Sections 1-9. 1 May 2005. <<http://eserver.org/emc/>>.
- Floyd-Wilson, Mary. 'English Mettle.' *Reading the Early Modern Passions: Essays in the Cultural History of Emotion*. Ed. Gail Kern Paster, Katherine Rowe and Mary Floyd-Wilson. Philadelphia: University of Pennsylvania Press, 2004. 130-146.
- Floyd-Wilson, Mary, Matthew Greenfield, Gail Kern Paster, Tanya Pollard, Katherine Rowe, Julian Yates. 'Shakespeare and Embodiment: An E-Conversation.' *Literature Compass* 2.1 (2005): 1-13. 24 April 2006. <<http://www.literature-compass.com>>.
- Floyd-Wilson, Mary and Garrett A. Sullivan. 'Inhabiting the Body, Inhabiting the World.' Introduction. *Environment and Embodiment in Early Modern England*. Ed. Mary Floyd-Wilson and Garrett A. Sullivan. Basingstoke: Palgrave Macmillan, 2007. 1-13.
- Forker, Charles. 'Longer Notes.' *King Richard II*. 3rd rev. ed. London: Arden Shakespeare, 2002. 485-505.
- Freud, Sigmund. 'Beyond the Pleasure Principle.' *The Freud Reader*. Ed. Peter Gay. London: Vintage, 1995. 594-626.
- . 'The Ego and the Id.' *The Freud Reader*. Ed. Peter Gay. London: Vintage, 1995. 628-658.
- Foucault, Michel. *Madness and Civilization*. 1967. Abingdon: Routledge Classics, 2001.
- . *The Order of Things: An Archaeology of the Human Sciences*. 1970. New York: Vintage Books, 1994.
- Fudge, Erica. *Perceiving Animals: Humans and Beasts in Early Modern English Culture*. 1999. Urbana: University of Illinois Press, 2002.
- Gallagher, Catherine and Stephen Greenblatt. *Practising New Historicism*. London: University of Chicago Press, 2000.
- Gillet, G. 'Cyborgs and Moral Identity.' *Journal of Medical Ethics* 32 (March 2007): 79-83.
- Gil Harris, Jonathan. *Untimely Matter in the Time of Shakespeare*. Philadelphia: University of Pennsylvania Press, 2009.
- Gilson, Etienne. *The Spirit of Mediaeval Philosophy*. 1936. Indiana: University of Notre Dame Press, 1991.
- Goldin, Frederick. *The Mirror of Narcissus in the Courtly Love Lyric*. New York: Cornell University Press, 1967.

- Goldin-Meadow, Susan. *Hearing Gesture: How Our Hands Help Us Think*. Cambridge, MA: Belknap Press, 2003.
- Goody, Jack. *The Interface Between the Written and the Oral*. Cambridge: Cambridge University Press, 1987.
- Gorman, Sara. 'The Theatricality of Transformation.' *Early Modern Literary Studies* 13.3 (2008): Sections 1-37.
- Gowing, Laura. *Common Bodies: Women, Touch and Power in Seventeenth Century England*. New Haven: Yale University Press, 2003.
- Gowland, 'The Problem of Early Modern Melancholy.' *Past and Present* 191 (May 2006): 77-120.
- Grabes, Herbert. *The Mutable Glass: Mirror-Imagery in Titles and Texts of the Middle Ages and English Renaissance*. Trans. Gordon Collier. Cambridge: Cambridge University Press, 1982.
- Grafton, Anthony and Ann Blair (eds.). *The Transmission of Culture in Early Modern Europe*. Philadelphia: University of Pennsylvania Press, 1990.
- Graziani, Rene. 'The Numbering of Shakespeare's Sonnets: 12, 60, and 126.' *Shakespeare Quarterly* 35.1 (Spring 1984): 79-82.
- Greenblatt, Stephen. *Learning to Curse: Essays in Early Modern Culture*. New York: Routledge, 1990.
- . *Renaissance Self-Fashioning: From More to Shakespeare*. Chicago: University of Chicago Press, 1980.
- Gregory, Richard L. *Mind in Science: A History of Explanations in Psychology and Physics*. Cambridge: Cambridge University Press, 1981.
- . *Mirrors in Mind*. London: Penguin, 1997.
- . 'Shaving in Ockham's Mirror.' *The Book of the Mirror*. Ed. Miranda Anderson. Newcastle: Cambridge Scholars Publishing, 2007. 94-104.
- Grush, Rick. 'The Emulation Theory of Representation: Motor Control, Imagery, and Perception.' *Behavioral and Brain Sciences* 27 (2004): 377-96.
- Haden, H.J. Rev. of *The Development of English Glassmaking, 1560-1640*, by Eleanor S. Godfrey. *Technology and Culture* 17.4 (October 1976): 788-790.
- Hall, Lawrence Sargent. 'Isabella's Angry Ape.' *Shakespeare Quarterly* 15.3 (Summer 1964): 157-65.
- Hampton, Timothy. 'Strange Alteration: Physiology and Psychology from Galen to Rabelais.' *Reading the Early Modern Passions: Essays in the Cultural History of Emotion*. Ed. Gail Kern Paster, Katherine Rowe and Mary Floyd-Wilson. Philadelphia: University of Pennsylvania Press, 2004. 272-293.
- Haraway, Donna J. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991.
- Harnard, Stevan. 'Distributed Processes, Distributed Cognizers and Collaborative Cognition.' *Pragmatics and Cognition* 13.3 (2005): 501-514.
- Hart, F. Elizabeth. 'The Epistemology of Cognitive Literary Studies.' *Philosophy and Literature* 25 (2001): 314-34.
- . 'The View of Where We've Been From Where We'd Like To Go.' *College Literature* 33.1 (2006): 225-37.
- Hayles, N. Katherine. 'Constrained Constructivism: Locating Scientific Enquiry in the Theater of Representation.' *Realism and Representation: Essays on the Problem of*

- Realism in Relation to Science, Literature, and Culture*. Ed. George Levine. Madison: University of Wisconsin Press, 1993. 27-43.
- . *How We Became Postmodern: Virtual Bodies in Cybernetics, Literature and Informatics*. Chicago: University of Chicago Press, 1999.
- . *My Mother Was a Computer*. Chicago: University of Chicago Press, 2005.
- Heidegger, Martin. *Being and Time*. 1926. Trans. J. Macquarrie and E. Robinson. Malden, MA: Blackwell, 2005.
- Hillman, David and Carla Mazzio. 'Individual Parts.' Introduction. *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*. Ed. David Hillman and Carla Mazzio. London: Routledge, 1997. xi-xxix.
- Hillman, Richard. *Self-Speaking in Medieval and Early Modern English Drama: Subjectivity, Discourse and the Stage*. Basingstoke: Macmillan, 1997.
- Hogan, Patrick Colm. *Cognitive Science, Literature and the Arts: A Guide for Humanists*. New York: Routledge, 2003.
- Howard, Jean. 'The New Historicism in Renaissance Studies.' *English Literary Renaissance* 16 (1986): 13-43.
- Hurley, Susan. 'The Shared Circuits Model (SCM): How Control, Mirroring, and Simulation Can Enable Imitation, Deliberation, and Mindreading.' *Behavioral and Brain Sciences* 31 (2008): 1-22.
- Hutchins, Edwin. *Cognition in the Wild*. Cambridge, MA: MIT Press, 1995.
- Huxley, T.H. 'Science and Culture.' *Science and Education: Essays*. London, 1893. 134-59.
- Iacobini, Marco. 'Mesial Frontal Cortex and Super Mirror Neurons.' *Behavioral and Brain Sciences* 31 (2008): 30.
- Jackson, Tony. 'Questioning Interdisciplinarity: Cognitive Science, Evolutionary Psychology, and Literary Criticism.' *Poetics Today* 21.2 (2000): 319-47.
- Jones, Ann Rosalind and Peter Stallybrass. *Renaissance Clothing and the Materials of Memory*. Cambridge: Cambridge University Press, 2000.
- Juarrero, Alice. 'We Have Always Been...Cyborgs.' *Metascience* 13 (2004): 149-53.
- Kalas, Rayna. 'The Technology of Reflection: Renaissance Mirrors of Steel and Glass.' *Journal of Medieval and Early Modern Studies* 32.3 (2002): 519-42.
- Kastan, David Scott. 'Is there a Class in This (Shakespearean) Text?' *Renaissance Drama* 24 (1993): 101-121.
- Kelly, Philippa. 'Surpassing Glass: Shakespeare's Mirrors.' *Early Modern Literary Studies* 8.1 (May 2002): 1-32. <<http://purl.oclc.org/emls/08-2/kellglas.htm>>.
- Kemp, Martin and Marina Wallace. *Spectacular Bodies: The Art and Science of the Human Body from Leonardo to Now*. London: Hayward Gallery, 2000.
- Kendon, Adam. Rev. of *Hearing Gesture: How our Hands Help us Think*, by Susan Goldin-Meadow. *Gesture* 4.1 (2001): 91-107.
- Kiernan, Michael, ed. *The Oxford Francis Bacon IV: The Advancement of Learning*. By Francis Bacon. Oxford: Clarendon Press, 2000.
- Kiverstein, Julian and Andy Clark. 'Bootstrapping the Mind.' *Behavioral and Brain Sciences* 31 (2008): 41-58.
- Knowles, James. "'Can ye not tell a man from a marmoset?': Apes and Others on the Early Modern Stage.' *Renaissance Beasts: Of Animals, Humans, and Other Wonderful Creatures*. Ed. Erica Fudge. Urbana: University of Illinois, 2004. 138-163.
- Kosslyn, Stephen. *Edge: The Third Culture* 2005. 18 June 2005. <<http://www.edge.org/>>.

- . 'On the Evolution of Human Motivation: The Role of Social Prosthetic Systems.' *Evolutionary cognitive neuroscience*. Eds. S. M. Platek and J.P. Keenan. Cambridge, MA: MIT Press, 2006. 541-554.
- Kristeller, Paul Oskar. *Renaissance Thought and Its Sources*. New York: Columbia University Press, 1979.
- Kuriyama, Shigehisa. 'Author's Response.' *Metascience* 10.3 (2001): 337-341.
- Lacan, Jacques. 'The Agency of the Letter in the Unconscious or Reason since Freud.' *Écrits: A Selection*. Trans. Alan Sheridan. London: Routledge, 1997. 146-178.
- . 'The Dream of Irma's Injection.' *The Seminar of Jacques Lacan, Book Two: The Ego in Freud's Theory and in the Technique of Psychoanalysis, 1954-55*. Ed. Jacques-Alain Miller. Trans. Sylvana Tomaselli. 146-60.
- . 'The Function of Language in Psychoanalysis.' *The Language of the Self*. Trans. Anthony Wilden. Baltimore: John Hopkins University Press, 1981. 1-87.
- . 'The Mirror Stage as Formative of the Function of the I.' *Écrits: A Selection*. Trans. Alan Sheridan. London: Routledge, 1997. 1-7.
- . 'Psychoanalysis and Cybernetics, or On the Nature of Language.' *The Seminar of Jacques Lacan, Book Two: The Ego in Freud's Theory and in the Technique of Psychoanalysis, 1954-55*. Ed. Jacques-Alain Miller. Trans. Sylvana Tomaselli. 294-308.
- Lakoff, George and Mark Johnson. *Metaphors We Live By*. 1980. Afterword. Chicago: University of Chicago Press, 2003.
- . *Philosophy in the Flesh*. New York: Basic Books, 1999.
- Landecker, Hannah. 'Living Differently in Time: Plasticity, Temporality and Cellular Biotechnologies.' *Culture Machine* 7 (2005). 12 June 2007.
<<http://culturemachine.tees.ac.uk>>.
- Langton, Rae. 'Sexual Solipsism.' *Philosophical Topics* 23.2 (Fall 1995): 149-187.
- Laqueur, Thomas. *Making Sex: Body and Gender from the Greeks to Freud*. Cambridge: Harvard University Press, 1990.
- Leavis, F. R. *Two Cultures? The Significance of C. P. Snow*. London: Chatto and Windus, 1962.
- Lee, John. 'Twins and Doubles as an Aspect of Shakespeare's Pluralism.' *Shakespeare in the Age of Cognitive Science*. Ed. Graham Bradshaw. Aldershot: Ashgate, 2004. 316-336.
- Lee, Huey-Ling. 'The Devil or the Physician: The Politics of Cooking and the Gendering of Cooks in Jonson and Massinger.' *English Literary Renaissance* 36.2 (2006): 250-277.
- Lewis, C.S. *The Discarded Image: An Introduction to Medieval and Renaissance Literature*. 1964. Cambridge: Cambridge University Press, 2000.
- Levao, Ronald. Rev. of *Shakespeare's Perjured Eye: The Invention of Poetic Subjectivity in the Sonnets*, by Joel Fineman. *Renaissance Quarterly* 40.4 (1987): 814-819.
- Liu, Alan. 'The Humanities: A Technical Profession.' *The Idea and Ideals of the University* (ACLS Occasional Paper No. 63) 2007: 13-22. 14 Jan. 2009.
<http://www.acls.org/Publications/OP/63_Ideas_and_Ideals.pdf>.
- Lovejoy, Arthur O. *The Great Chain of Being*. 1936. Cambridge, MA and London: Harvard University Press 1982.
- MacDonald, Michael. *Mystical Bedlam: Madness, Anxiety, and Healing in Seventeenth Century England*. Cambridge: Cambridge University Press, 1981.
- MacDonald, Paul S. *History of the Concept of the Mind: Speculations about Soul, Mind, and Spirit from Homer to Hume*. Vol. 1. Aldershot: Ashgate, 2003.

- . *History of the Concept of the Mind: The Heterodox and Occult Tradition*. Vol. 2. Aldershot: Ashgate, 2007.
- Maravati, Angelo and Atsushi Iriki. 'Tools for the body (schema).' *Trends in Cognitive Science* 8.2 (2004): 79-86.
- Mason, Stephen F. *A History of the Sciences*. New York: Collier Books, 1971.
- Masten, Jeffrey. *Textual Intercourse: Collaboration, Authorship, and Sexualities in Renaissance Drama*. Cambridge: Cambridge University Press, 1997.
- Matthews, Paul M. and Jeffrey McQuain. *The Bard on the Brain: Understanding the Mind through the Art of Shakespeare and the Science of Brain Imaging*. New York: The Dana Press, 2003.
- Maturana, Humberto R. and Francisco J. Varela. *Autopoiesis and Cognition: The Realization of the Living*. Dordrecht: D. Reidel, 1980.
- Maus, Katharine Eisaman. *Inwardness and Theater in the English Renaissance*. Chicago: University of Chicago Press, 1995.
- Mazzio, Carla. 'Sins of the Tongue.' *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*. Ed. David Hillman and Carla Mazzio. London: Routledge, 1997. 54-79.
- Mazzio, Carla and Douglas Trevor. 'Dreams of History' Introduction. *Historicism, Psychoanalysis and Early Modern Culture*. Ed. Carla Mazzio and Douglas Trevor. New York: Routledge, 2000. 1-18.
- McNeill, David. *Gesture and Thought*. Chicago: University of Chicago Press, 2005.
- Melchior-Bonnet, Sabine. *The Mirror: A History*. Trans. Katharine H. Jewett. New York: Routledge, 2002.
- Merleau-Ponty. *Phenomenology of Perception*. 1962. Trans. Colin Smith. London: Routledge, 2006.
- Michael, Emily. 'Renaissance Theories of Body, Soul and Mind.' *Psyche and Soma: Physicians and Metaphysicians on the Mind-Body Problem from Antiquity to Enlightenment*. Ed. John P. Wright and Paul Potter. Oxford: Oxford University Press, 2000. 147-72.
- Michael, Emily and Fred S. Michael. 'Two Early Modern Concepts of Mind: Reflecting Substance vs. Thinking Substance.' *Journal of the History of Philosophy* 27.1 (1989): 29-48.
- Miller, Jonathan. *On Reflection*. London: National Gallery Publications, 1998.
- Milne, Louise S. *Carnivals and Dreams: Pieter Bruegel and the History of the Imagination*. London: Mutus Liber, 2007.
- Minnis, A.J. and A.B. Scott, eds. *Medieval Literary Theory and Criticism: The Commentary Tradition*. 1988. Rev. ed. Oxford: Clarendon Press, 1998.
- Montrose, Louis. 'New Historicisms.' *Redrawing the Boundaries: The Transformation of English and American Literary Studies*. Ed. Stephen Greenblatt and Giles B. Gunn. New York: MLA, 1992. 392-418.
- Moss, Ann. 'The Politica of Justus Lipsius and the Commonplace-Book.' *Journal of the History of Ideas* 59.3 (1998): 421-436.
- Nagel, Thomas. *Mortal Questions*. 1979. Cambridge: Cambridge University Press, 1995.
- Neely, Carol Thomas. *Distracted Subjects: Madness and Gender in Shakespeare and Early Modern Culture*. New York: Cornell University Press, 2004.
- Newbold, William. Introduction. *The Passions of the Mind in General*. By Thomas Wright. New York: Garland Publishing, 1986. 1-88.
- Niedenthal, Paula. 'Embodying Emotion.' *Science* 316 (2007): 1002-05.

- Noë, Alva. *Action in Perception*. Cambridge, MA: MIT Press, 2004.
- . 'Experience Without the Head.' *Perceptual Experience*. Ed. Tamar Szabó Gendler and John Hawthorne. Oxford: Oxford University Press, 2006. 411-33.
- O'Brien, Gerald and Jon Opie. 'A Connectionist Theory of Phenomenal Experience.' *Behavioural and Brain Sciences* 22 (1999): 127-48.
- . 'The Multiplicity of Consciousness and the Emergence of the Self.' *The Self in Neuroscience and Psychiatry*. Ed. Tilo Kircher and Anthony David. Cambridge: Cambridge University Press, 2003. 107-20.
- Ong, Walter. *Orality to Literacy: The Technologizing of the Word*. 1982. London: Routledge Press, 1991.
- . Rev. of *The Art of Memory*, by Frances Yates. *Renaissance Quarterly* 20.2 (1967): 253-9.
- Ortalano, Guy. 'F. R. Leavis, Science, and the Abiding Crisis of Modern Civilisation.' *History of Science* 43 (2005): 161-85.
- Paster, Gail Kern. *The Body Embarrassed: Drama and the Disciplines of Shame in Early Modern England*. New York: Cornell University Press, 1993.
- . *Humoring the Body: Emotions and the Shakespearian Stage*. Chicago: University of Chicago Press, 2004.
- Paster, Gail Kern, Katherine Rowe and Mary Floyd-Wilson. 'Reading the Early Modern Passions.' Introduction. *Reading the Early Modern Passions: Essays in the Cultural History of Emotion*. Ed. Gail Kern Paster, Katherine Rowe and Mary Floyd-Wilson. Philadelphia: University of Pennsylvania Press, 2004. 1-20.
- Pendergrast, Mark. *Mirror Mirror: A History of the Human Love Affair with Reflection*. New York: Basic Books, 2004.
- Piccolino, Marco and Nicholas J. Wade. 'Galileo's Eye: A New Vision of the Senses in the Work of Galileo Galilei.' *Perception* 37 (2008): 1312-40.
- Poole, Kristen. 'Psychologizing Physics.' *Shakespeare Studies* 33 (2005): 95-100.
- Porter, Roy. *Madness: A Brief History*. Oxford: Oxford University Press, 2002.
- . 'The Two Cultures Revisted.' *Boundary 2* 23.2 (1996): 1-17.
- Radden, Jennifer. *Moody Minds Distempered: Essays on Melancholy and Depression*. Oxford: Oxford University Press, 2009.
- Ramachandran, V. S. 'The Marco Polo of Neuroscience.' Interview transcript. *All in the Mind: ABC Radio National*. 7 May 2005. 10 May 2005.
<<http://www.abc.net.au/rn/science/mind/stories/s1358883.htm>>.
- . 'The Neurology of Self-Awareness.' *Edge: The Third Culture*. 8 Jan. 2007. 15 Feb 2007. <<http://www.edge.org/>>.
- . 'Mirror Neurons and Imitation Learning as the Driving Force behind "the Great Leap Forward" in Human Evolution.' *Edge: The Third Culture*. 29 June 2000. 10 May 2005. <<http://www.edge.org/>>.
- Ramachandran, V. S. and Sandra Blakeslee. *Phantoms in the Brain: Probing the Mysteries of the Human Mind*. New York: Harper Collins, 1998.
- Ramachandran, V. S. and Edward M. Hubbard. 'Hearing Colors, Tasting Shapes.' *Scientific American* May 2003: 53-9.
- Ramachandran, V. S. and D. Rogers Ramachandran. 'Synaesthesia in Phantom Limbs Induced with Mirrors.' *Proceedings: Biological Sciences* 263 (1996): 377-386.
- Randall Jr., John Herman. Introduction. *The Renaissance Philosophy of Man*. Ed. Ernest Cassirer and Paul Oskar Kristeller. Chicago: University of Chicago Press, 1948. 257-79

- Rée, Jonathan. *I See a Voice: Deafness, Language and the Senses – A Philosophical History*. New York: Metropolitan Books, 1999.
- Reiss, Timothy J. 'Revising Descartes: on Subject and Community.' *Representations of the Self from the Renaissance to Romanticism*. Ed. Coleman, Lewis and Kowalk. Cambridge, University of Cambridge, 2000.16-38.
- Richardson, Alan. 'Cognitive Science and the Future of Literary Studies.' *Philosophy and Literature* 23.1 (1999): 157-73.
- Richardson, Alan and Francis F. Steen. 'Literature and the Cognitive Revolution: An Introduction.' *Poetics Today* 23.1 (2002): 1-8.
- Rizzolatti, Giacomo and Laila Craighero. 'The Mirror Neuron System.' *Annual Review of Neuroscience* 27 (2004): 169-92.
- Rizzolatti, Giacomo, Leonardo Fogassi and Vittorio Gallese. 'Mirrors in Mind.' *Scientific American* November 2006: 54-61.
- Rizzolatti, Giacomo and Corrado Sinigaglia. *Mirrors in the Brain: How our Minds Share Actions and Emotions*. Trans. Frances Anderson. Oxford: Oxford University Press, 2008.
- Robson, Mark. *The Sense of Early Modern Writing: Rhetoric, Poetics, Aesthetics*. Manchester: Manchester University Press, 2007.
- Rhodes, Neil and Jonathan Sawday. 'Paperworlds: Imagining the Renaissance Computer.' *The Renaissance Computer*. Ed. Neil Rhodes and Jonathan Sawday. London: Routledge, 2000. 1-17.
- Rosenberg, Daniel. 'Early Modern Information Overload.' *Journal of the History of Ideas* 64.1 (2003): 1-10.
- Ross, J. Andrew. 'Will Robots See Humans as Dinosaurs?' *Journal of Consciousness Studies* 13.12 (2006): 97-104.
- Rovane, Carol. *The Bounds of Agency: An Essay in Revisionary Metaphysics*. Princeton: Princeton University Press, 1998.
- Rowe, Katherine. 'Humoral Knowledge and Liberal Cognition in Davenant's *Macbeth*.' *Reading the Early Modern Passions*. Ed. Gail Kern Paster, Katherine Rowe, and Mary Floyd Wilson. Philadelphia: University of Pennsylvania Press: 2004. 169-191.
- Rublack, Ulinka. 'Fluxes: the Early Modern Body and the Emotions.' Trans. Pamela Selwyn. *History Workshop Journal* 53 (2002): 1-16.
- Rumelhart, D.E., P. Smolensky, J.L. McClelland and G.E. Hinton. 'Schemata and Sequential Thought Processes in PDP Models.' *Parallel Distributed Processing: Explorations in the Microstructure of Cognition*. Vol. 2. Ed. J.L. McClelland, D.E. Rumelhart and PDP Group. Cambridge, MA: MIT Press, 1986. 7-57.
- Rumelhart, D.E. and J.L. McClelland. 'PDP Models and General Issues in Cognitive Science.' *Parallel Distributed Processing: Explorations in the Microstructure of Cognition*. Vol. 1. Ed. J.L. McClelland, D.E. Rumelhart and PDP Group. Cambridge, MA: MIT Press, 1986. 110-146.
- Rundus, Raymond J. 'Time and His "Glass" in *The Winter's Tale*.' *Shakespeare Quarterly* 25.1 (1974), 123-125.
- Saussure, Ferdinand. *Course in General Linguistics*. Ed. Balley and Sechehayé. Trans. Roy Harris. Chicago: Open Court, 2006.
- Sawday, Jonathan. *The Body Emblazoned: Dissection and the Human Body in Renaissance Culture*. London: Routledge, 1995.
- . *Engines of the Imagination: Renaissance Culture and the Rise of the Machine*. Abingdon: Routledge, 2007.

- . 'Self and Selfhood in the Seventeenth Century.' *Rewriting the Self: Histories from the Renaissance to the Present*. Ed. Roy Porter. London: Routledge, 1997.
- Schoenfeldt, Michael C. *Bodies and Selves in Early Modern England: Physiology and Inwardness in Spenser, Shakespeare, Herbert and Milton*. Cambridge: Cambridge University Press, 1999.
- . 'Fables of the Belly in Early Modern England.' *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*. Ed. David Hillman and Carla Mazzio. New York: Routledge, 1997. 243-262.
- Screech, M.A. 'Good Madness in Christendom.' *The Anatomy of Madness: Essays in the History of Psychiatry*. Vol. 1. Ed. W.F. Bynum, Roy Porter, and Michael Shepherd. London: Tavistock, 1985. 25-39.
- Sherman, William H. *Used Books: Marking Readers in Renaissance England*. Philadelphia: University of Pennsylvania Press, 2008.
- Shickman, Allan. 'The Fool's Mirror in *King Lear*.' *English Literary Renaissance* 21.1 (1991): 75-86.
- . 'The "Perspective Glass" in Shakespeare's *Richard II*.' *Studies in English Literature, 1500-1900* 18.2 (1978): 217-228.
- Shuger, Deborah. 'Life-writing in Seventeenth Century England.' *Representations of the Self from the Renaissance to Romanticism*. Ed. Patrick Coleman, Jayne Lewis and Jill Kowalk. Cambridge: Cambridge University Press, 2000. 63-78.
- Skultans, Vieda. *English Madness: Ideas on Insanity, 1580-1890*. London: Routledge and Kegan Paul, 1979.
- Smith, A. Mark, ed. Introduction. *Witelonis Perspectivae*. By Witelo. Ed. and trans. A. Mark Smith. Warsaw: The Polish Academy of Sciences Press, 1983. 1-72.
- Smith, Bruce. Introduction. *Shakespeare Studies* 29 (2001): 19-26.
- Snow, C.P. *The Two Cultures*. Ed. Stefan Collini. Cambridge: Cambridge University Press, 1993.
- Sokal, Alan and Jean Bricomont. *Intellectual Impostures*. 1998. Trans. Alan Sokal and Jean Bricomont. London: Profile Books, 2003.
- Solms, Mark and Edward Nersessian. Editor's Introduction. *Neuro-Psychoanalysis* 1 (1999): 3.
- Speak, Gill. 'An Odd Kind of Melancholy: Reflections on the Glass Delusion in Europe, 1440-1680.' *History of Psychiatry* 1 (1990): 191-206.
- Spivak, Bernard. *Shakespeare and the Allegory of Evil: The History of a Metaphor in Relation to his Villains*. New York: Columbia University Press, 1958.
- Spolsky, Ellen. *Word vs. Image: Cognitive Hunger in Shakespeare's England*. Hampshire: Palgrave Macmillan, 2007.
- Spufford, Margaret. *Small Books and Pleasant Histories: Popular Fiction and its Readership in Seventeenth-Century England*. Cambridge: Cambridge University Press, 1985.
- Stallybrass, Peter, Roger Chartier, Franklin J. Mowery, and Heather Wolfe. 'Hamlet's Tables and the Technologies of Writing in Renaissance England.' *Shakespeare Quarterly* 55.4 (2004): 379-419.
- Steen, Francis F. 'Grasping Philosophy by the Roots.' Rev. of *Philosophy in the Flesh*. By George Lakoff and Mark Johnson. *Philosophy and Literature* 24 (2000): 197-203.
- Stelarc. 'Prosthetic Head: Intelligence, Awareness, and Agency.' *CTheory*. 19 Oct. 2005. 19 June 2007. <<http://www.ctheory.net>>.

- Strier, Richard. 'Against the Rule of Reason: Praise of Passion from Petrarch to Luther to Shakespeare to Herbert.' *Reading the Early Modern Passions: Essays in the Cultural History of Emotion*. Ed. Gail Kern Paster, Katherine Rowe and Mary Floyd-Wilson. Philadelphia: University of Pennsylvania Press, 2004. 23-42.
- Strier, Richard and Carla Mazzio. 'Two Responses to "Shakespeare and Embodiment: An E-Conversation".' *Literature Compass* 3.1 (2006): 15-31. 24 April 2006. <<http://www.literature-compass.com>>.
- Sutton, John. 'Exograms and Interdisciplinarity: History, the Extended Mind and the Civilizing Process.' *John Sutton's Page*. March 2005. 20 April 2005. <<http://www.phil.mq.edu.au/staff/jsutton/>>.
- . *Philosophy and Memory Traces*. Cambridge: Cambridge University Press, 1998.
- . 'Spongy Brains and Material Memories.' *Environment and Embodiment in Early Modern England*. Ed. Mary Floyd-Wilson and Garrett A. Sullivan, Jr. Basingstoke: Palgrave Macmillan, 2007.
- Taylor, Shelley E. and Jonathon D. Brown. 'Illusion and Well-Being: A Social Psychological Perspective on Mental Health.' *Psychological Bulletin* 103.2 (1988): 193-210.
- Traub, Valerie. *The Renaissance of Lesbianism in Early Modern England*. Cambridge: Cambridge University Press, 2002.
- Tribble, Evelyn. 'Distributing Cognition in the Globe.' *Shakespeare Quarterly* 56.2 (2005): 135-55.
- . "'To Ease the Burden of the Brain": Distributed Cognition in Early Modern England.' *Scan: Journal of Media Arts Culture* 2.2 (2005). 26 Feb. 2008. <<http://scan.net.au/scan/journal>>.
- Turella, Luca, Andrea C. Pierno, Federico Tubaldi, Umberto Castiello. 'Mirror neurons in humans: Consistent or confounding evidence.' *Brain and Language* 30 (2008): 1-12.
- Turing, A.M. 'Computing Machinery and Intelligence.' *Mind* 49 (1950): 433-60.
- Turner, J. Scott. *The Extended Organism: The Physiology of Animal-Built Structures*. Cambridge, MA: Harvard University Press, 2000.
- Turner, Mark. *The Literary Mind: The Origins of Thought and Language*. Oxford, Oxford University Press, 1996.
- Tylus, Jane. "'Par Accident": The Public Work of Modern Theater.' *Reading the Early Modern Passions*. Ed. Gail Kern Paster, Katherine Rowe, and Mary Floyd Wilson. Philadelphia: University of Pennsylvania Press, 2004. 253-271.
- Van Leeuwen, Cees. 'What Needs to Emerge to Make You Conscious?' *Journal of Consciousness Studies* 14.1-2 (2007): 115-36.
- Varela, F.J. 'Metaphor to Mechanism; Natural to Disciplined.' *Journal of Consciousness Studies* 4.4 (1997): 344-6.
- Varela, F.J., E. Thompson, and E. Rosch. *The Embodied Mind: Cognitive Science and Human Experience*. Cambridge, MA: MIT Press, 1991.
- Vendler, Helen. *The Art of Shakespeare's Sonnets*. Cambridge, MA: Harvard University Press, 1997.
- Vickers, Brian. Introduction. *English Renaissance Literary Criticism*. Ed. Brian Vickers. Oxford: Oxford University Press, 1999. 1-55.
- Vickers, Nancy J. 'Members Only: Marot's Anatomical Blazons.' *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*. Ed. David Hillman and Carla Mazzio. London: Routledge, 1997. 3-22.

- Voss, Stephen. 'Descartes: Heart and Soul.' *Psyche and Soma: Physicians and Metaphysicians on the Mind-Body Problem from Antiquity to Enlightenment*. Ed. John P. Wright and Paul Potter. Oxford: Oxford University Press, 2000. 173-296.
- Vygotsky, Lev. *Thought and Language*. 1962. Trans. Alex Kozulin. Cambridge, MA: MIT Press, 1986.
- Waddington, Raymond B. "'All in All": Shakespere, Milton, Donne and the Soul-in-Body Topos.' *English Literary Renaissance* 20.1 (2004): 40-68.
- Whitaker, Elaine E. 'The Mirror and the Halogen Bulb: A Review Essay.' *South Atlantic Review* 59.2 (1994): 113-124.
- Wheeler, Michael. *Reconstructing the Cognitive World*. Cambridge, MA: MIT Press, 2005.
- Williams, Gordon. *A Glossary of Shakespeare's Sexual Language*. Atlantic Highlands, NJ: Athlone Press, 1997.
- Williamson, Beth. 'Mirrors in Art: Images as Mirrors.' *The Book of the Mirror*. Ed. Miranda Anderson. Newcastle: Cambridge Scholars Publishing, 2007. 132-150.
- Wilson, Timothy D. *Strangers to Ourselves: Discovering the Adaptive Unconscious*. Cambridge, MA: Belknap Press, 2002.
- Yates, Francis. *The Art of Memory*. London: Routledge and Kegan Paul, 1966.
- Zitner, Sheldon P. Introduction. *The Knight of the Burning Pestle*. By Francis Beaumont. Manchester: Manchester University Press, 2004. 1-50.
- Ziokowski, Theodore. *Disenchanted Images: A Literary Iconology*. Princeton: Princeton University Press, 1977.